

D-555/Z555

SERVICE MANUAL



*US Model
Canadian Model*

D - 555

*AEP Model
UK Model
E Model*

D - Z555

Discman

Model Name Using Similar Mechanism	D - 250
CD Mechanism Name	CDM - 555

SPECIFICATIONS

CD section

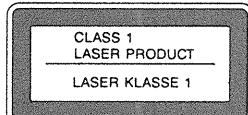
System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wavelength: 780 nm Emission duration: Continuous Laser output: Less than 44.6 µW
	This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.
Error correction	Sony Super Strategy Cross Interleave Reed Solomon Code
D-A conversion	16-bit linear, 8fS digital filter
Frequency response	20 - 20,000 Hz ±1 dB*
Signal-to-noise ratio	More than 90 dB
Wow and flutter	Below measurable limit*
Outputs (at 9 V input level)	Line output (stereo minijack) Output level 0.7 V rms at 50 kilohms Load impedance over 10 kilohms Optical digital output (optical output connector) Output level: -21 - -15 dBm Wavelength: 630 - 690 nm at peak level Headphones (stereo minijack) 9 mW + 9 mW at 32 ohms

* Measured by EIAJ CP-307

CAUTION

The use of optical instruments with this product will increase eye hazard.

For the Customers in the United Kingdom and European Countries



This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

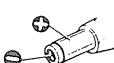
General

Power requirements	Supplied rechargeable battery pack (BP-2EX) or BP-100 (optional) DC IN 9 V jack accepts: Supplied AC power adaptor for use on 120V AC, 60 Hz Sony CPM-200P car mount plate (optional) or Sony DCC-120A car battery cord (optional) for use on 12 V car battery
Power consumption	3.2 W DC
Dimension	Approx. 127.6 x 33 x 145 mm (5 x 15/16 x 511/16 inches) (w/h/d) not incl. inclined part (depth), projecting parts and controls
Weight	Approx. 130 x 33.8 x 145.5 mm (51/8 x 13/16 x 511/16 inches) (w/h/d) incl. projecting parts and controls
Supplied accessories	Approx. 520g (1.2lb) not incl. rechargeable battery Approx. 600g (1.5lb) incl. rechargeable battery (BP-2EX) AC power adaptor (1) Rechargeable battery pack (1) Carrying case (1) Connecting cord (1) (stereo miniplug - two phono plugs)

Design and specifications subject to change without notice.

Notes on AC power adaptor

- Disconnect the AC power adaptor when the unit will not be used.
- Use only the supplied AC power adaptor or the recommended car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



Polarity of the Sony plug

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

COMPACT DISC COMPACT PLAYER

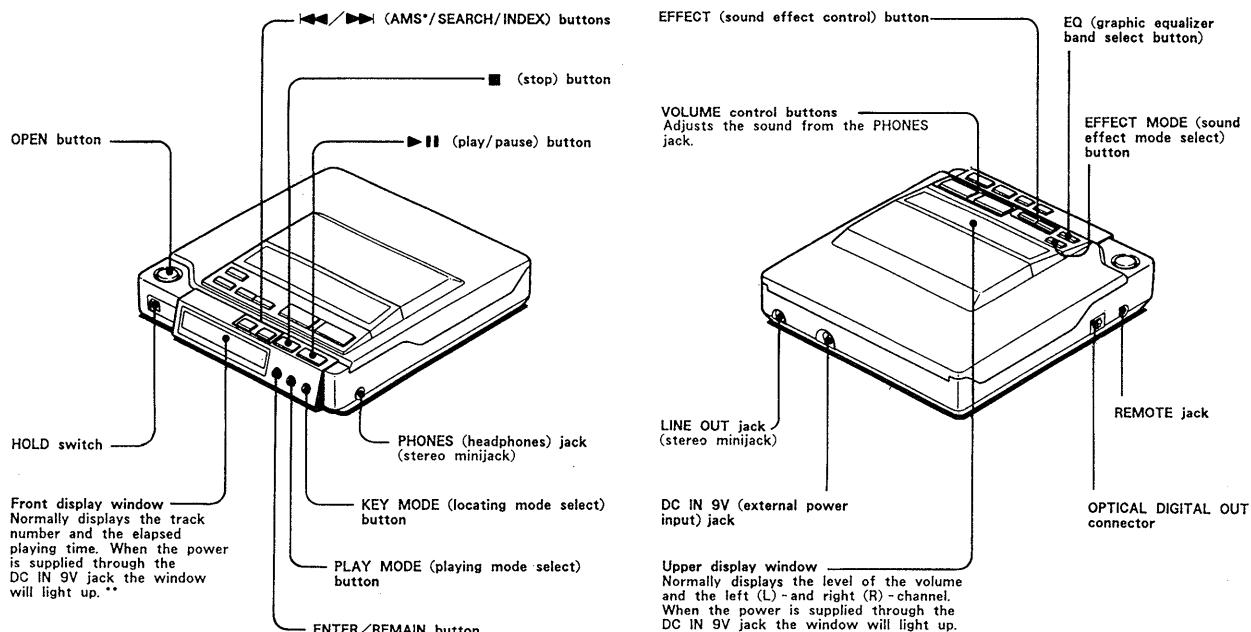
SONY®

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SECTION 1 GENERAL

Location and Function of Controls



SECTION 2

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at $270^{\circ} \pm 10^{\circ}\text{C}$ during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block.

Note and specifications required to check are given below.

- FOK output: IC501 (9) pin
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 (24) pin.
- S carve P-to-P value: 2.95 Vp-p
- Adjusted part for focus gain adjustment: RV505
- RF signal P-to-P value: 0.75 – 1.4 Vp-p
- Traverse signal P-to-P value: 1.8 Vp-p
- The grating holder can not repair.
- Adjusted part for tracking gain adjustment: RV501

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S901 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.

The laser diode is checked using the current value which flows to the laser diode inside the UPE.

Procedure 1 (service mode or normal operation)

Check the laser diode emission with the eye

1. Open upper panel.
 2. S901 on as Fig. 1.
(In service mode, this operation is not necessary.)
 3. Press the ►II key.
(In service mode, this operation is not necessary.)
 4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus serach. If it does not, APC circuit or UPF is defective.

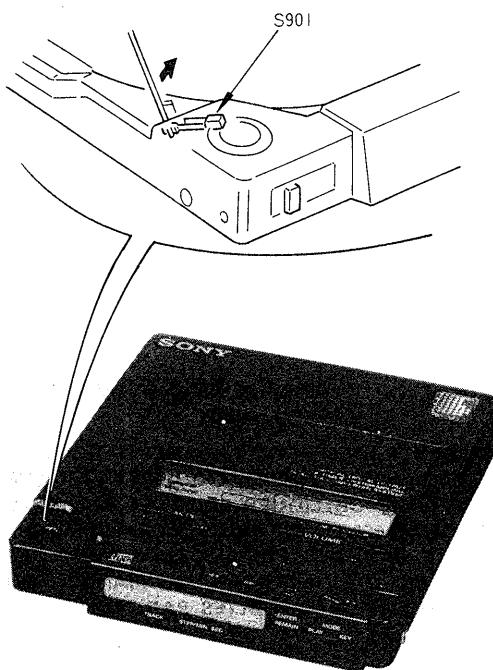
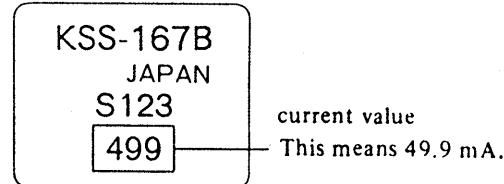


Fig. 1 Turning S901 on

Procedure 2 (service mode or normal operation)

Check by the current with flows in the laser diode.

1. Close the top panel.
 2. Remove the main board and read the current value on the label affixed to the UPF.
(Label on UPF)



The current value varies with the set.

3. Connect a VOM as shown in Fig. 2.
 4. Press the $\blacktriangleright \blacksquare$ key.
 5. Calculate the current by the VOM reading.
 $VOM\ reading\ (V) \div 10 = current\ (A)$
ex. $VOM\ reading = 0.49\ V$
 $0.49 \div 10 = 0.049\ (A) = 49\ (mA)$
 6. Confirm that the ammeter reading is within the range given below.
value on label $^{+5}_{-11}\ mA\ (25^\circ C)$
variation relative to temperature:
 $0.4\ mA / ^\circ C$
(Current increases when temperature rises and decreases when it drops.)
If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or UPF is defective.

- servo board -

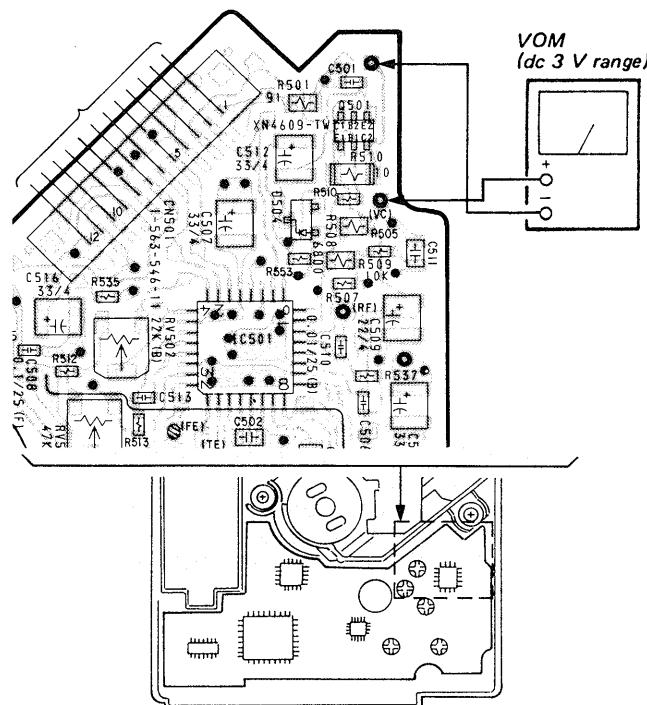


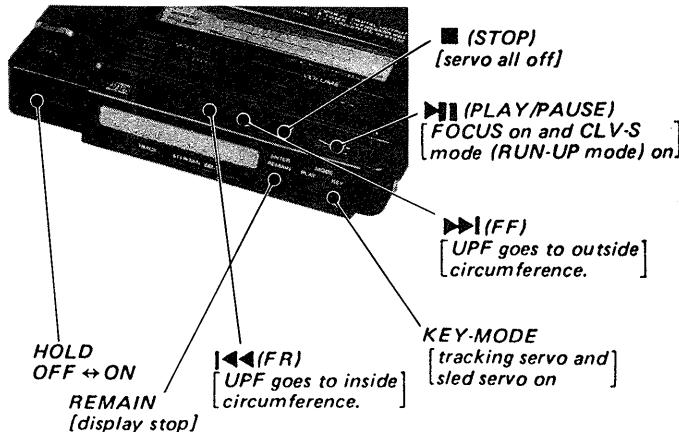
Fig. 2 VOM Connection

SERVICE MODE (service program)

This set has built-in service program in the micro-computer as usual sets.

The operation method of service program is explained below.

[]: Main operation in service mode
for details, refer to step 2.



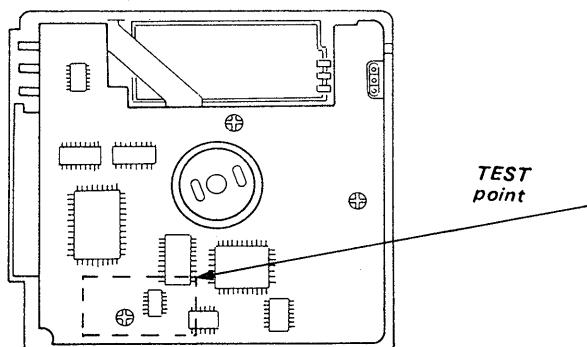
Be sure to set HOLD switch OFF.
If not key inputs can not be operated.

Fig. 3 Key Positions

Step 1 (Service Mode setting method)

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the ▶▶ key.
2. Solder jumper TEST point.
(IC801 pin ⑨ (BAT-E) pin is grounded.)
3. Plug in external power supply.
This puts the set into service mode.

— main board —

**Step 2 (Service Mode operation)**

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.

With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.

2. When ▶▶ or ▶◀ key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When ▶▶ key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S901 are to be ON.
7. All servo (focus, tracking, sled and spindle) go off when ■ key is pressed. But disc motor continues rotating for a while by inertia.

Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the TEST point solder jumper.
2. The set will now operate normally.

TEST
Solder jumper for service mode.
(After checking or adjusting in service mode,
be sure to remove this solder jumper.)

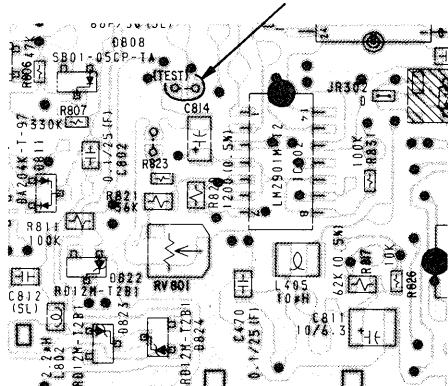


Fig. 4 TEST Point Position

SECTION 3

ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT and BATTERY DISPLAY ADJUSTMENT in service mode. Be sure to release service mode after completing adjustment.

(Refer to "Service Mode (service program)" on page 5.)

2. Perform adjustments in the order given.

3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.

4. Power supply voltage: DC 9 V
HOLD switch: OFF

PREPARATION

Put the set into service mode (see page 5) and perform the following checks. Repair if there are any abnormalities.

• Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the **►►**, **◀◀** keys and make sure that the UPF moves smoothly, without catching, from the inmost → outmost → inmost circumference.

►►: UPF moves outward

◀◀: UPF moves inward

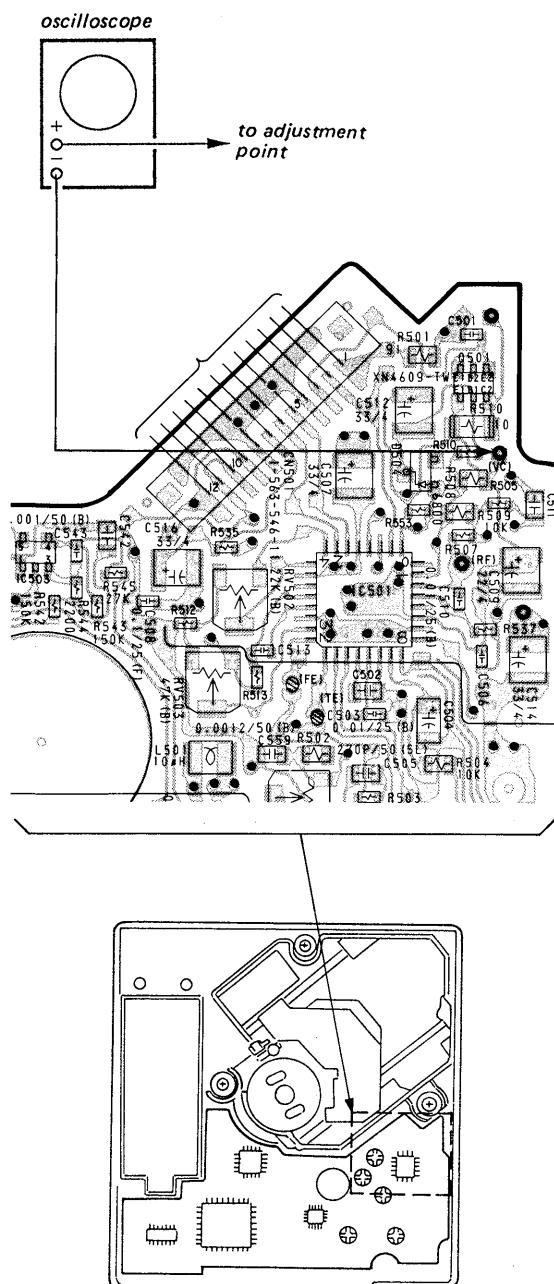
• Focus Search Check

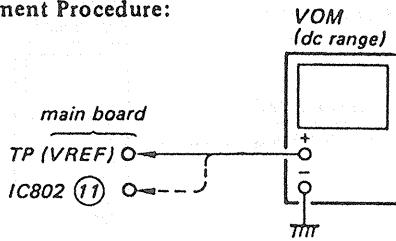
1. Press the OPEN button and open the top panel.
2. Press the **►■■** key. (Focus search is performed continuously.)
3. Observe the UPF objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the **■** key.

Check that focus search operation stops. If it does not stop, press the **■** key again longer than before. But disc motor continues rotating for a while by inertia.

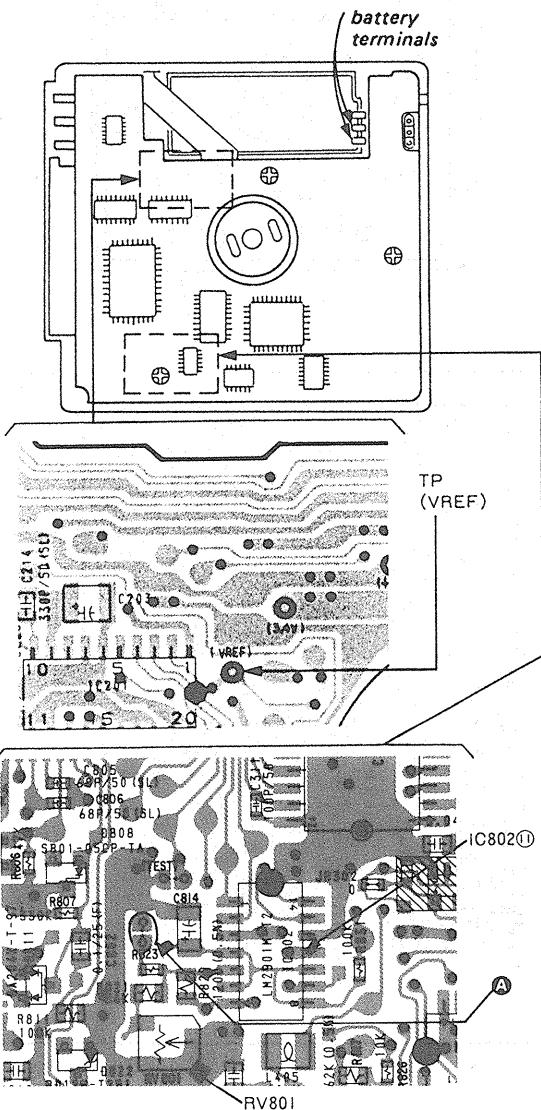
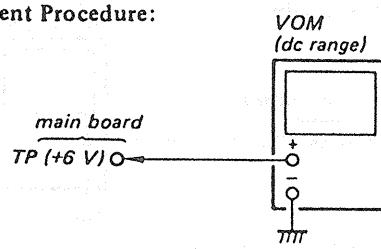
VC (1/2 Vcc) Connecting Point
FOCUS BIAS ADJUSTMENT
TRACKING BALANCE ADJUSTMENT

When the adjustments above are performed, connect the **(—)** side of oscilloscope to the point below.

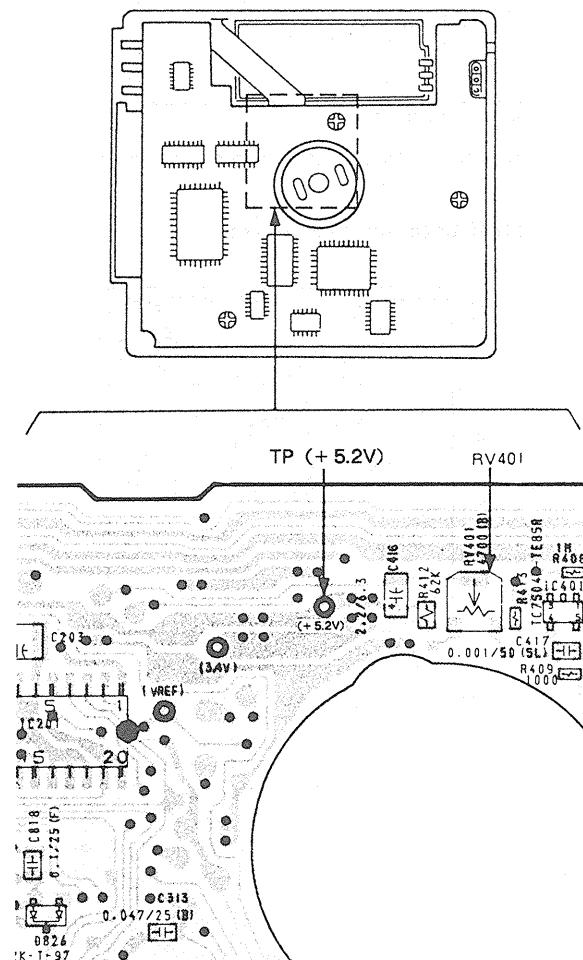


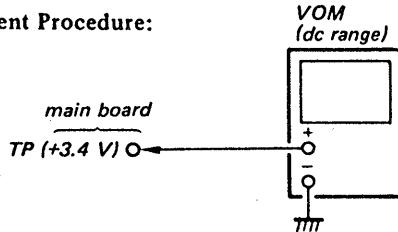
Battery Display Adjustment**Adjustment Procedure:**

1. Apply dc +3.5 V to terminals for built in battery (BP-2).
2. Insert the disc (YEDS-18) and put the set into play mode.
3. Adjust RV801 so that main board IC802 (11) voltage and TP (VREF) voltage are equal.
4. If IC802 (11) voltage is higher than TP (VREF) voltage when turning the RV801 fully counter-clockwise, short the jumper point (A) as shown below and adjust RV801.

Adjustment Location: main board**+ 5.2 V Adjustment****Adjustment Procedure:**

1. Put the set into service mode (see page 5).
2. Connect the VOM to main board TP (+ 5.2 V).
3. Adjust RV401 for $+5.2 \pm 0.1$ V reading on the VOM.
4. After adjustment, release service mode (see page 5).

Adjustment Location: main board

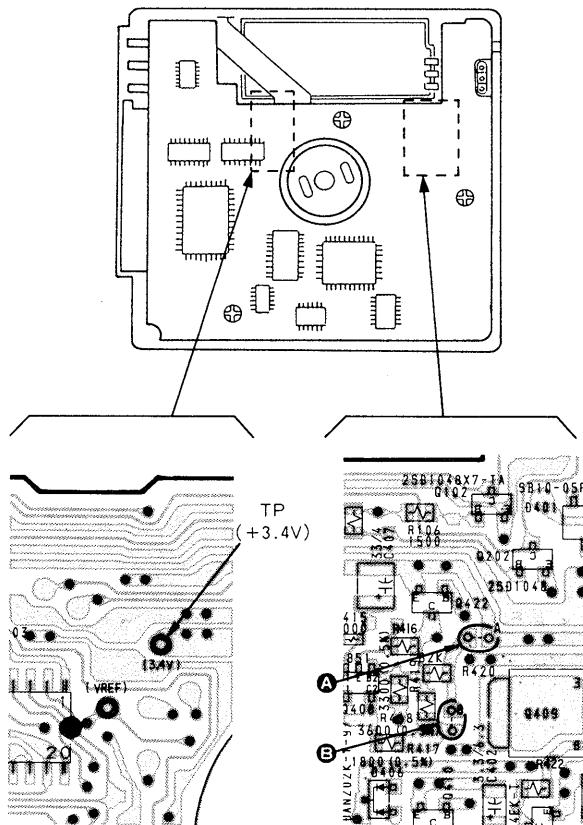
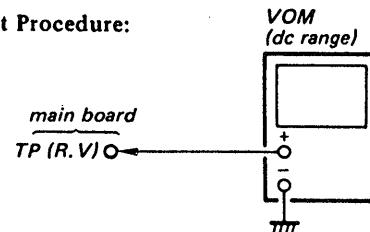
+3.4 V Adjustment**Adjustment Procedure:**

1. Put the set into service mode (see page 5).
2. Connect the VOM to main board test point TP (+3.4 V).
3. Adjust the pattern connecting (A or B) to obtain 3.5 to 3.7 V reading on the VOM.

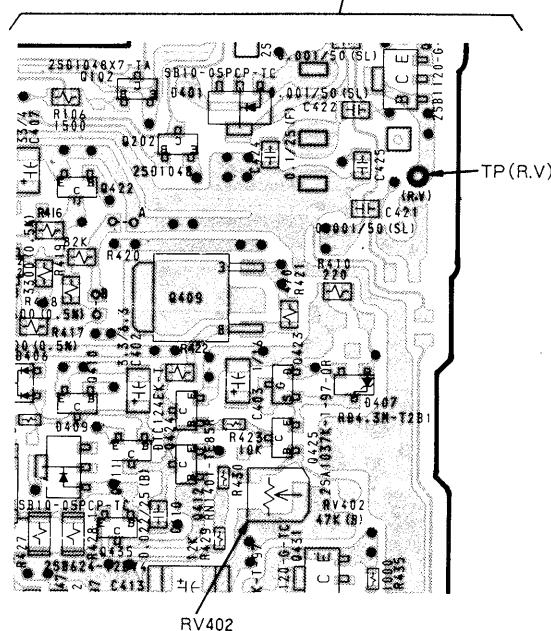
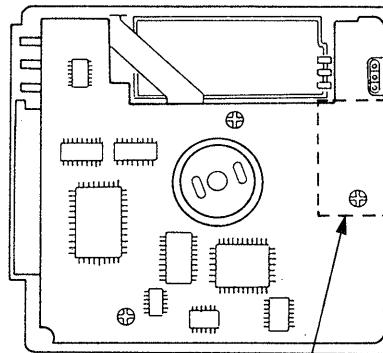
pattern connection		VOM reading
A	B	down ↔ up
O	X	
X	X	
X	O	
O	O	

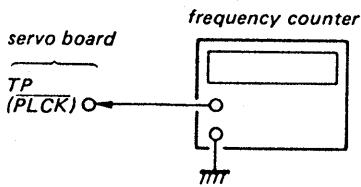
O: short X: open

4. After adjustment, release service mode (see page 5).

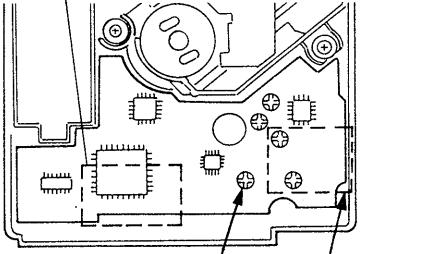
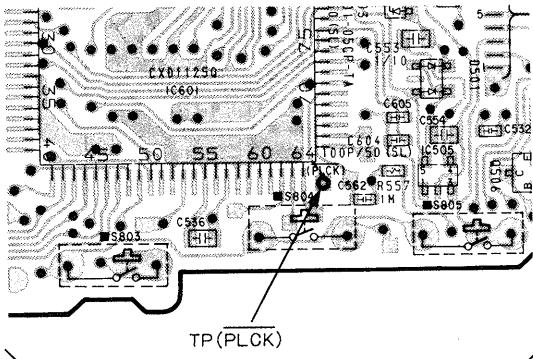
Adjustment Location: main board**Rechargeable Voltage Adjustment****Adjustment Procedure:**

1. Connect the VOM to main board test point TP (R.V).
2. Apply DC 9 V with required dc power supply from external power jack CN401.
3. Adjust RV402 for 7.05 – 7.5 V reading on the VOM.

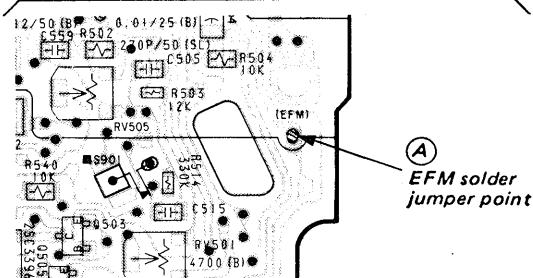
Note: Measure after the VOM reading becomes stable.**Adjustment Location:** main board

PLL Free Run Frequency Check and Adjustment**Check/Adjustment Procedure:**

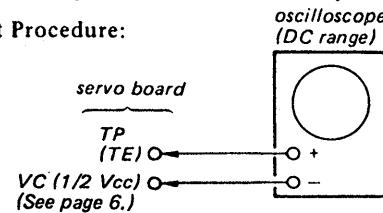
1. Disconnect the jumper point **(A)** (EFM) in the diagram below.
2. Connect a frequency counter to servo board test point TP (PLCK).
3. Put the set into service mode (see page 5).
4. Check that the frequency counter reading is 4.310 ± 0.01 MHz. If not, adjust RV504 so that it is 4.310 ± 0.01 MHz.
5. After adjustment, release service mode (see page 5).
6. Short the jumper point shorted in step 1.

Check/Adjustment Location: servo board

(A) EFM solder jumper point
Disconnect for checking and adjustment. Short after checking and adjustment.

**Tracking Balance Adjustment****Conditions:**

The set should be placed either horizontally.

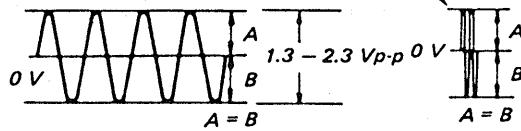
Adjustment Procedure:

1. Connect the oscilloscope to servo board TP (TE).
2. Put the set into service mode (see page 5).
3. Press the **►►** and **◀◀** keys to move the UPF to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the **►►** key.

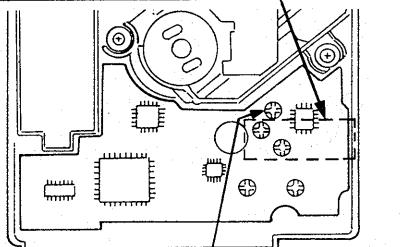
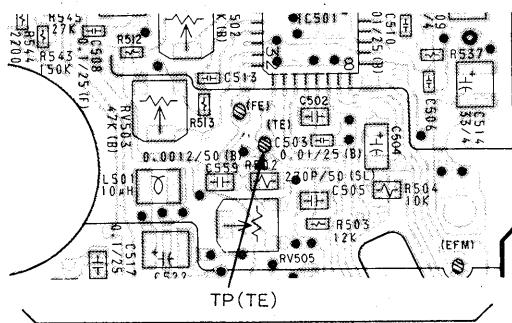
(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)

6. Adjust RV502 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

Note: Take sweep time as long as possible to obtain best waveform.



7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 5).

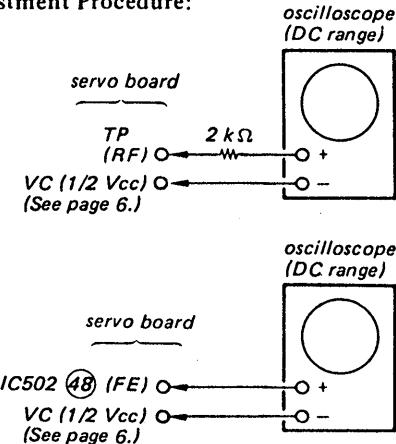
Adjustment Location: servo board

Focus Bias Adjustment

Conditions:

The set should be placed either horizontally,

Adjustment Procedure:

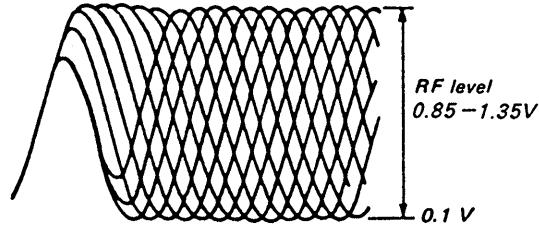


1. Put the set into service mode (see page 5).
 2. Connect the oscilloscope to servo board test point TP (RF).
 3. Press the $\blacktriangleright\blacktriangleright$ and $\blacktriangleleft\blacktriangleleft$ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
 4. Insert the disc (YEDS-18) and close the top panel.
 5. Press the $\blacktriangleright\blacksquare$ key.
It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.
 6. Press the KEY-MODE button. (Tracking and sled go ON.)
 7. Adjust RV503 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (\diamond) in the center of the waveform can be clearly distinguished.

● RF Signal Reference Waveform (eye pattern)

- RF Signal Reference Waveform (eye pattern)

VOLT/DIV: 200 mV
TIME/DIV: 500 nS



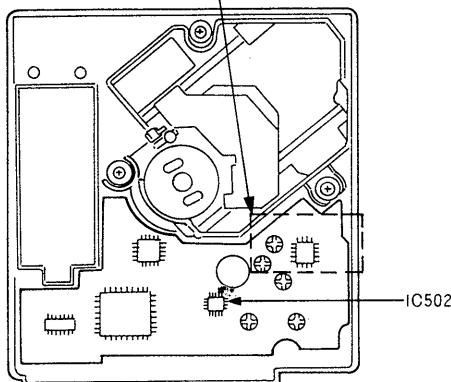
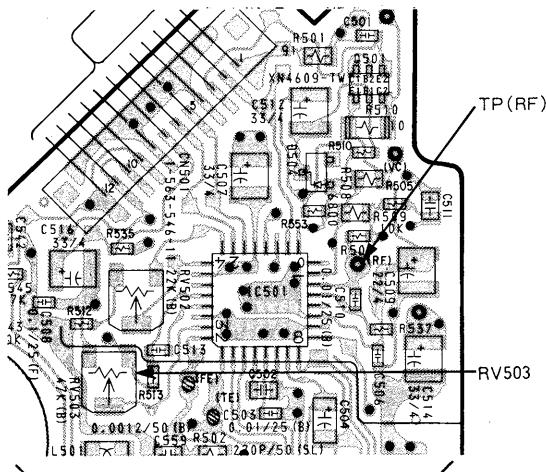
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Push the ■ (STOP) button spindle motor from rotating and remove the disc.
 9. Remove the disc and connect the oscilloscope to main board IC502 48 (FE).
 10. Adjust RV503 again referring to the table followed.

oscilloscope reading	adjustment
more than + 70mV	Not adjust again.
+ 70mV to 0 mV	Adjust RV503 again for + 70mV reading on oscilloscope.
0mV to -20 mV	Adjust RV503 again for -20 mV reading on oscilloscope.
less than -20 mV	Not adjust again.

11. After adjustment, release service mode (see page 5).

Adjustment Location: servo board



Focus/Tracking Gain Adjustment

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform from this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts:

- optical pick-up block
- RV505 (focus gain VR)
- RV501 (tracking gain VR)

Be careful not to move RV505 (focus gain volume) and RV501 (tracking gain volume) ordinarily.

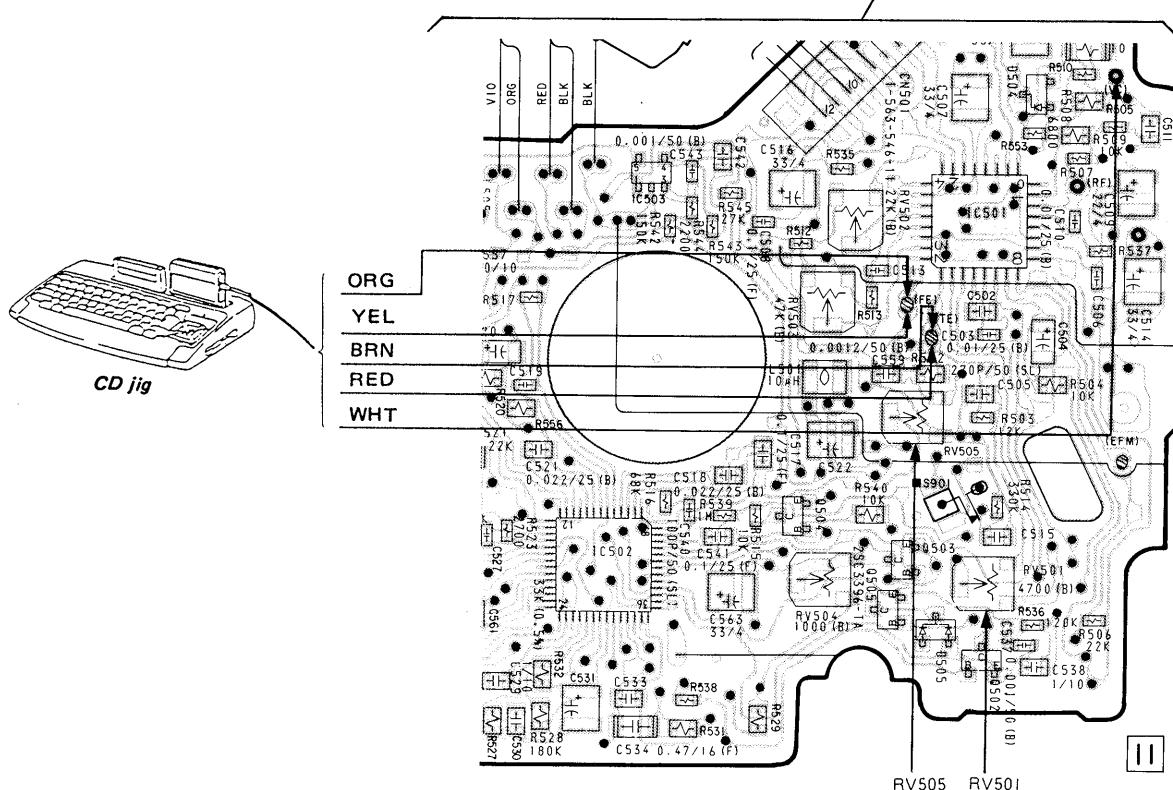
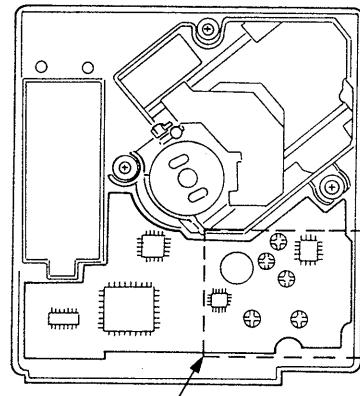
On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

CD Jig Connecting Procedure:

Remove the solder jumpers at the TE and FE locations and connect the DC jig.

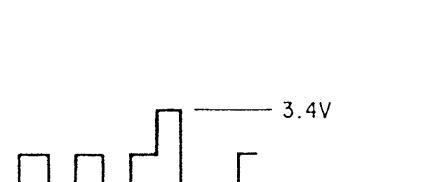
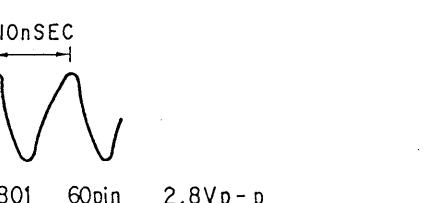
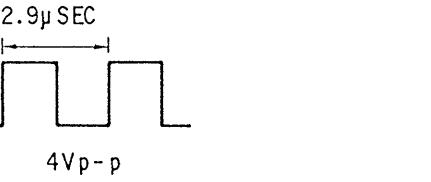
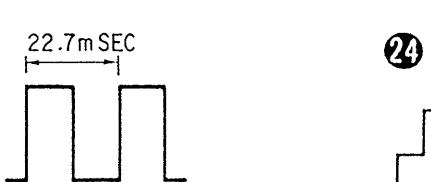
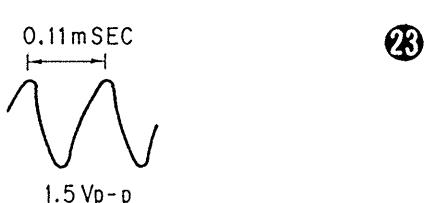
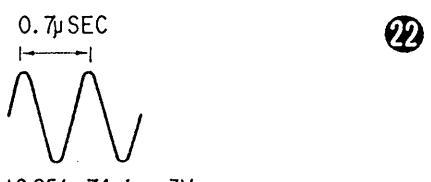
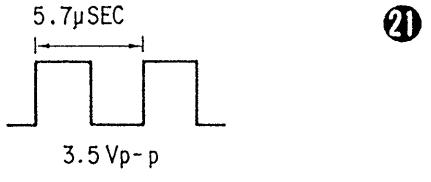
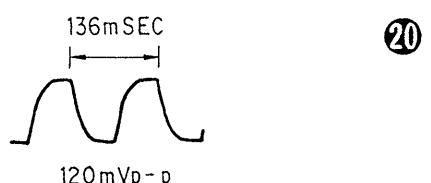
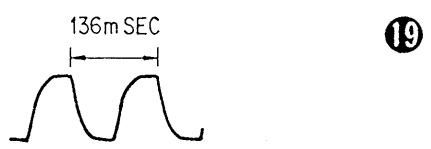
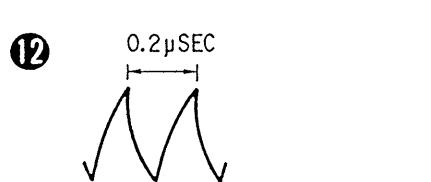
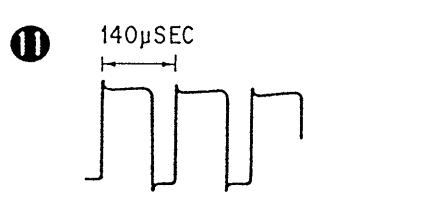
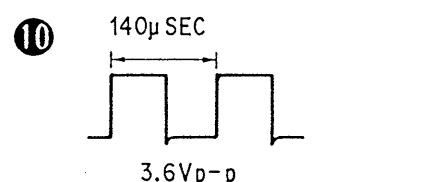
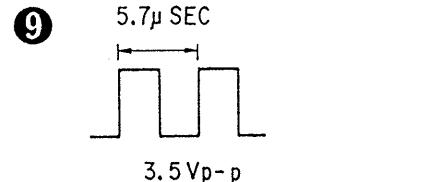
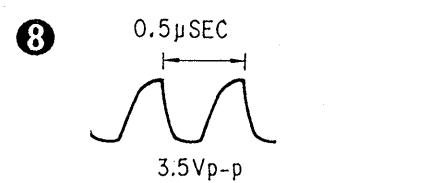
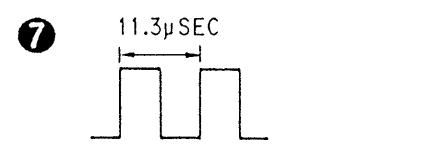
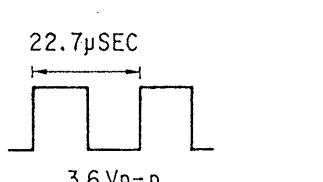
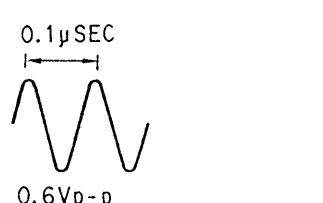
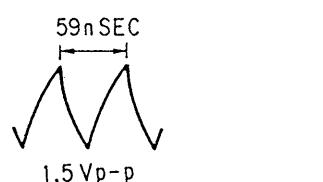
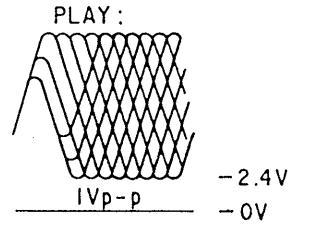
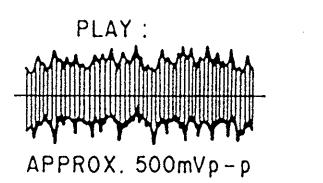
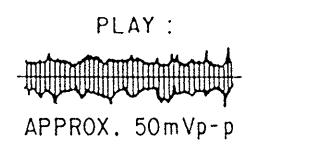
(Connect the points on both TE and FE located on the side of IC501 to the output to the CD jig, and points located on the side of volumes to the input from the CD jig.)

— servo board —

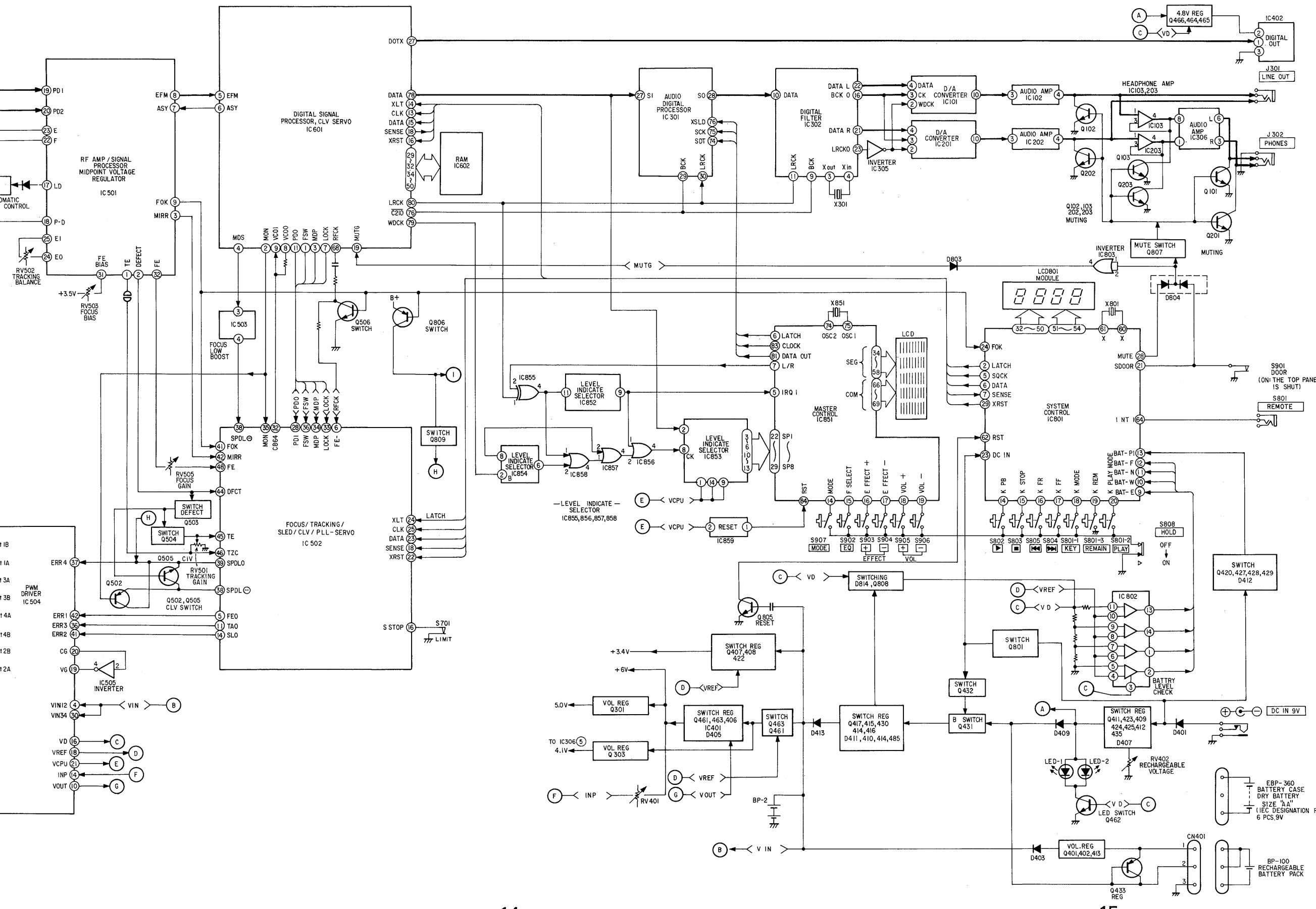


SECTION 4 DIAGRAMS

4-1. WAVEFORMS



4-2. BLOCK DIAGRAM

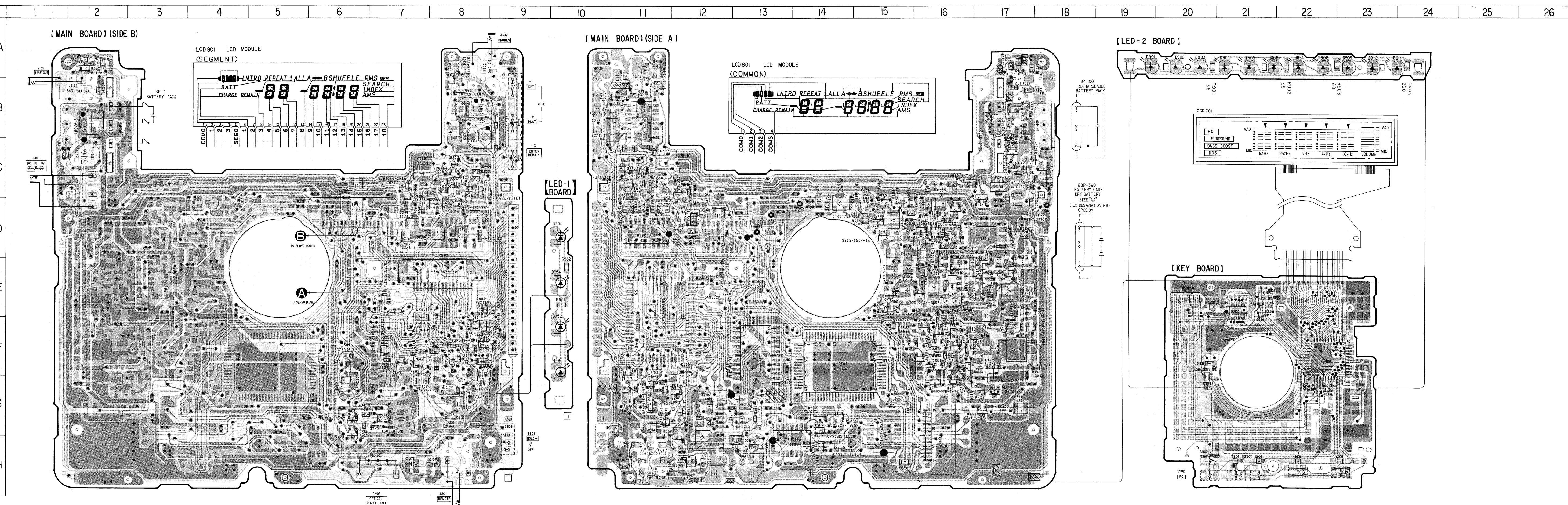


• Semiconductor Lead Layouts

Ref. No.	Location	Ref. No.	Location
D301	A-8	IC802	G-13
D302	A-2	IC803	F-9
D303	A-2	IC851	F-22
D304	B-8	IC852	H-5
D305	H-16	IC853	F-21
D401	C-17	IC854	H-14
D403	B-17	IC855	H-15
D405	D-15	IC856	G-14
D406	E-16	IC857	H-14
D407	E-18	IC858	H-14
D409	E-16	IC859	G-21
D410	F-16	Q101	B-9
D411	G-16	Q102	C-17
D412	F-16	Q103	D-8
D413	G-17	Q201	B-8
D414	F-18	Q202	D-17
D415	G-17	Q203	C-8
D450	E-15	Q301	D-12
D485	F-16	Q303	C-7
DB01	F-8	Q401	C-18
DB03	F-8	Q402	B-17
DB04	F-8	Q403	F-16
DB05	G-11	Q404	D-15
DB07	G-11	Q406	D-15
DB08	G-12	Q407	D-16
DB09	F-7	Q408	D-18
DB10	F-7	Q409	D-17
DB11	G-12	Q410	E-16
DB13	G-11	Q411	E-17
DB14	G-6	Q412	E-17
DB22	H-12	Q413	C-18
DB23	H-12	Q414	G-16
DB24	H-12	Q415	G-17
DB25	G-11	Q416	F-17
DB26	E-13	Q417	F-17
D901	A-20	Q418	F-17
D902	A-20	Q420	F-15
D903	A-20	Q421	F-16
D904	A-21	Q422	D-16
D905	A-21	Q423	E-17
D906	A-22	Q424	F-17
D907	A-22	Q425	E-17
D908	A-22	Q427	F-16
D909	A-23	Q428	F-16
D910	A-23	Q429	F-16
D911	A-24	Q430	F-16
D951	G-10	Q431	F-17
D952	F-10	Q432	F-17
D954	E-10	Q433	C-18
D955	D-10	Q435	E-17
IC101	D-11	Q461	D-15
IC102	C-11	Q462	G-17
IC103	D-9	Q463	D-16
IC201	D-12	Q464	E-16
IC202	D-12	Q465	E-16
IC203	D-8	Q801	F-7
IC301	F-14	Q804	G-8
IC302	F-13	Q805	G-11
IC305	E-7	Q806	G-9
IC306	B-11	Q807	E-9
IC401	C-15	Q808	H-6
IC402	H-7	Q809	G-8
IC801	F-11		

Note:

- : Through hole.
- : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.



4-4. SCHEMATIC DIAGRAM — MAIN SECTION —

M — MAIN SECTION -

- See page 12 for waveforms.

• See page 31 for IC block diagram.

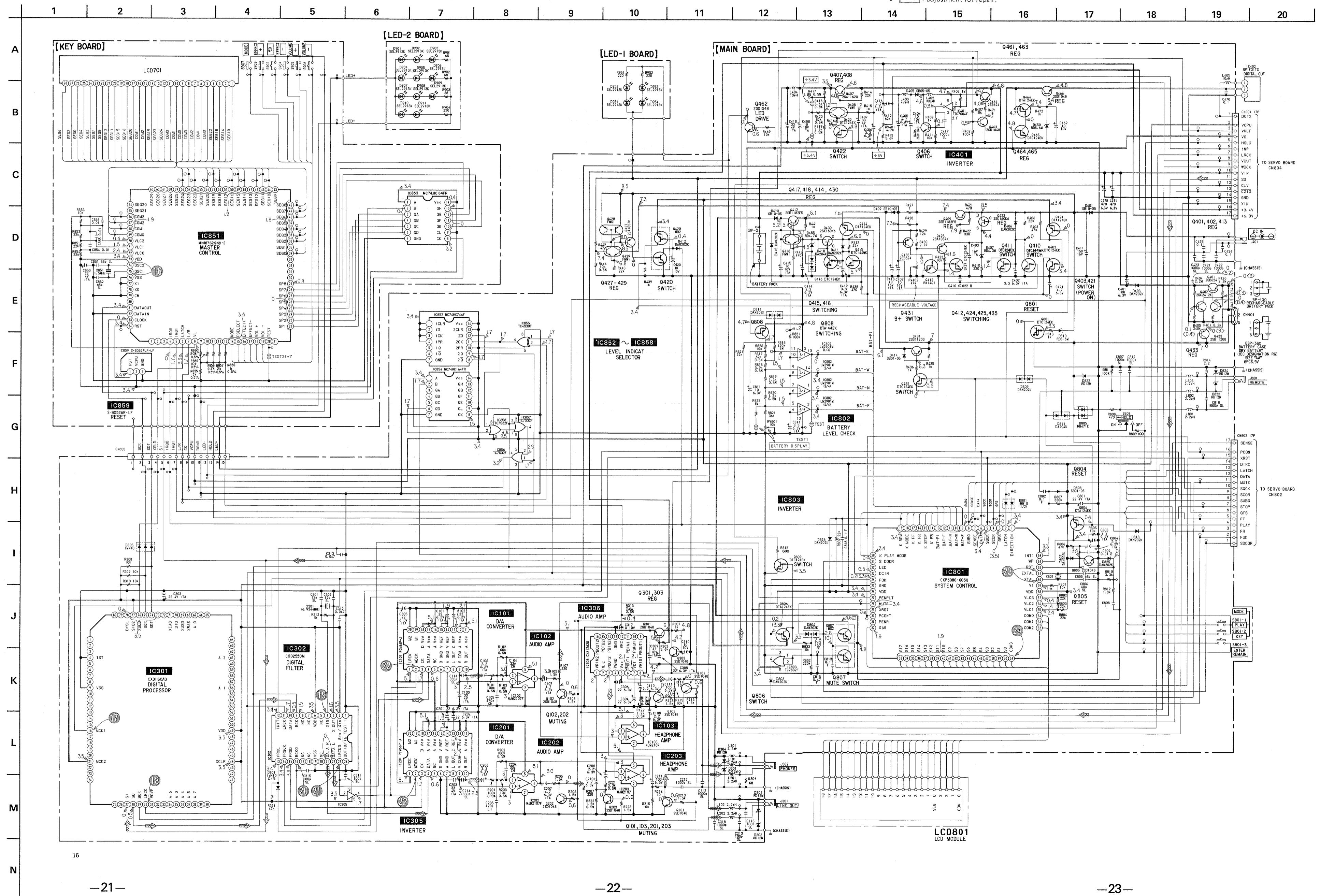
Not

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
50WV or less are not indicated except for electrolytics
and tantalums.
All resistors are in Ω and $1/4\text{W}$ or less unless otherwise
specified.
% : indicates tolerance.

Note: The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
no mark: stop
(): play
< >: values when a power supply of 9V dc supplied from the battery terminal.
 - Voltages are taken with a VOM (Input impedance $10M\Omega$).
 - Circle numbers refer to waveforms.
 - Signal path.

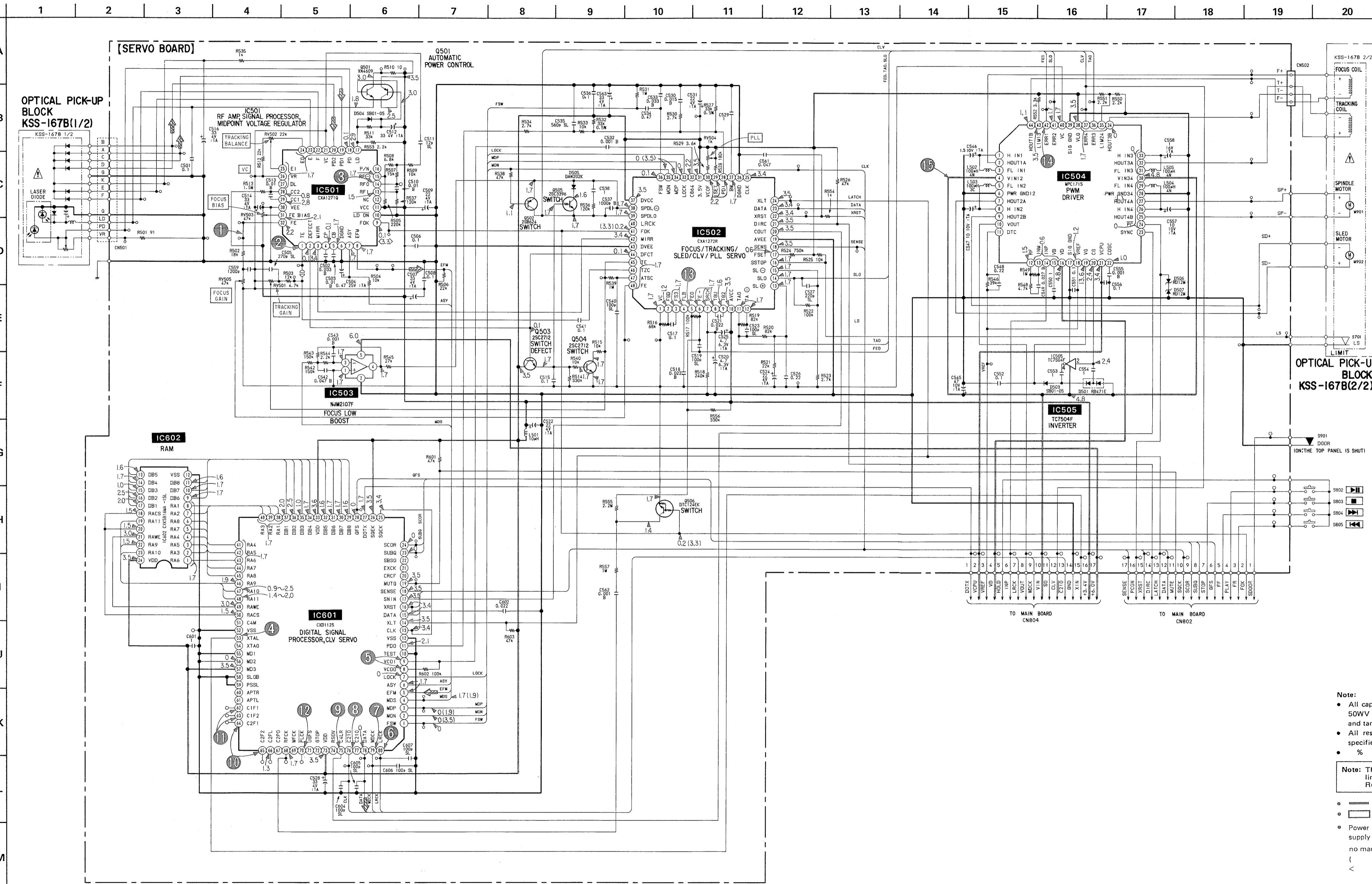
 : CD



4-5. SCHEMATIC DIAGRAM — SERVO SECTION —

• See page 12 for waveforms.

• See page 31 for IC block diagram.



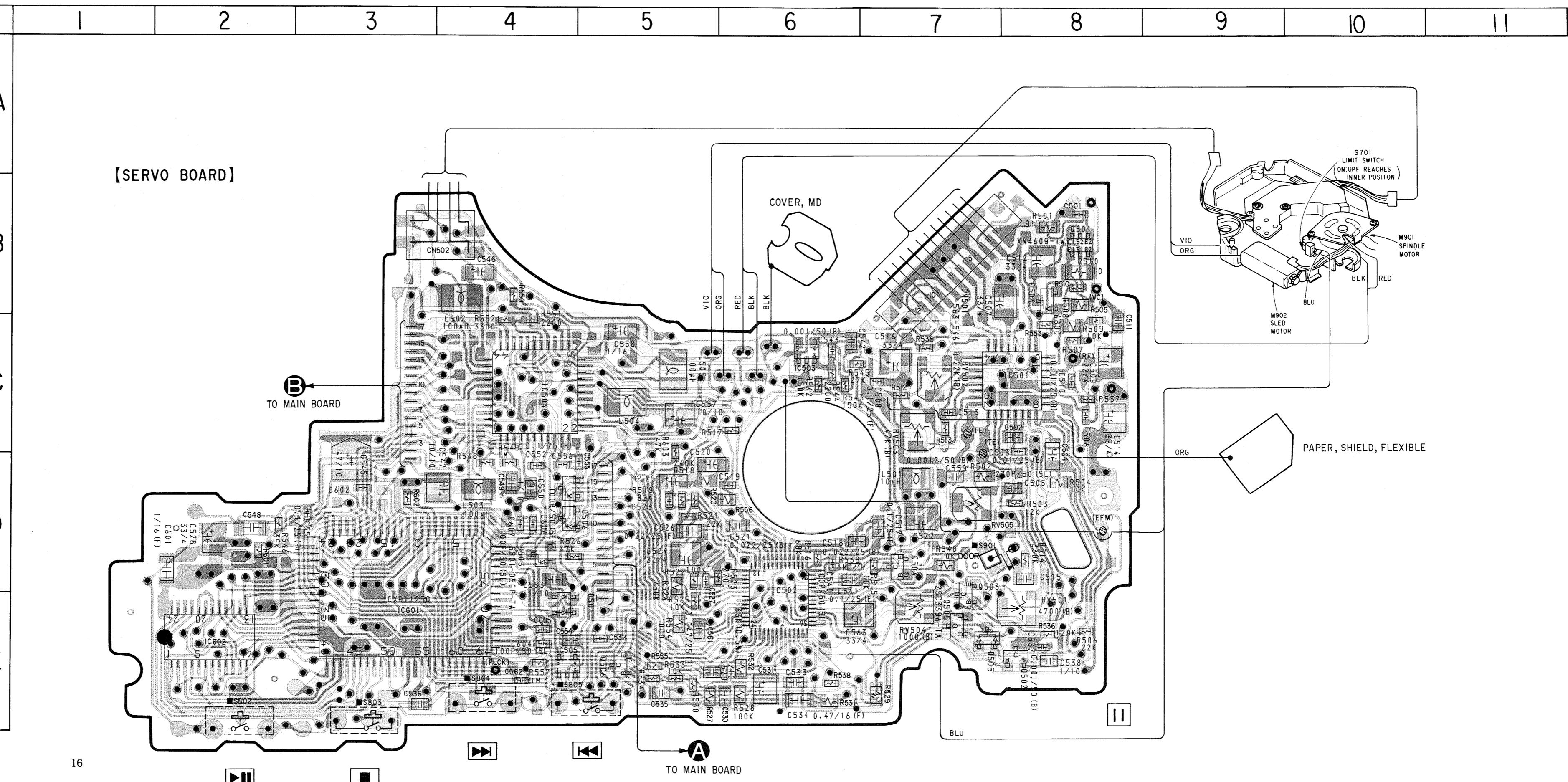
- Note:
 • All capacitors are in μF unless otherwise noted. pF: μF 50W or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 • % : indicates tolerance.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

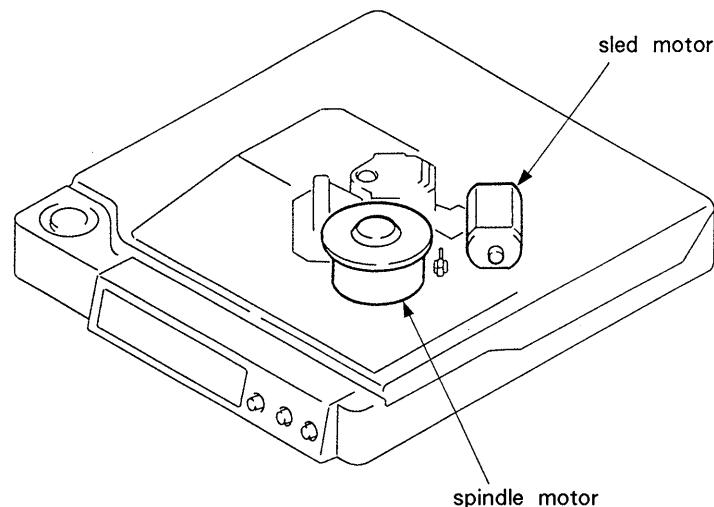
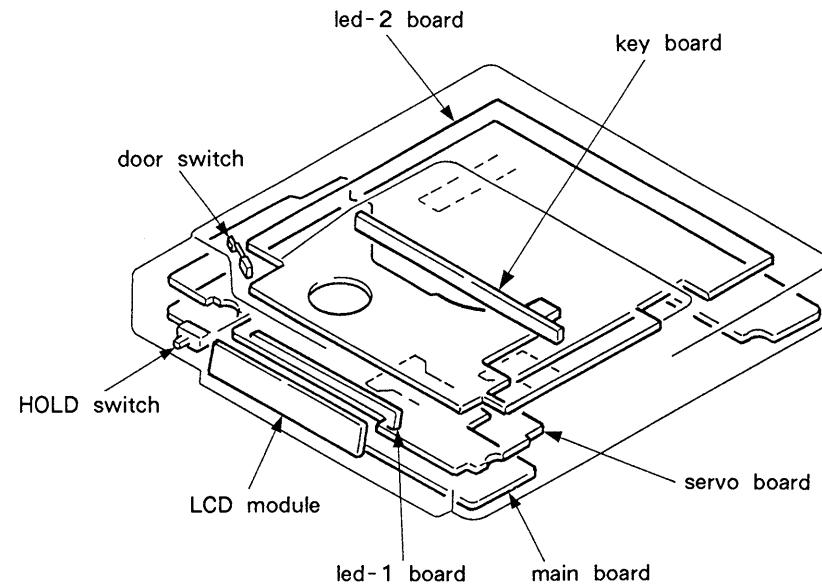
- : B+ Line
- : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
no mark: stop
(): play
< >: values when a power supply of 9V dc supplied from the battery terminal.
- Voltages are taken with a VOM (Input impedance 10M Ω).
- Circled numbers refer to waveforms.
- Signal path.
- : CD

4-6. PRINTED WIRING BOARD — SERVO SECTION —

• See page 30 for Semiconductor Lead Layouts.



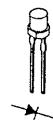
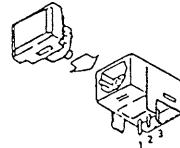
- CIRCUIT BOARD LOCATION



- Semiconductor Lead Layouts

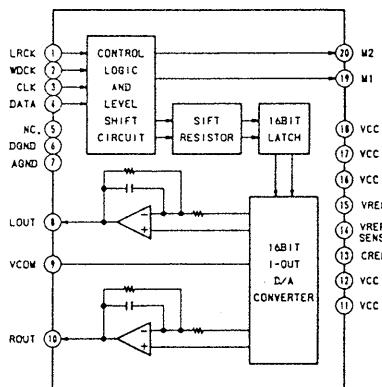
GP1F31T

SEL2913K-D

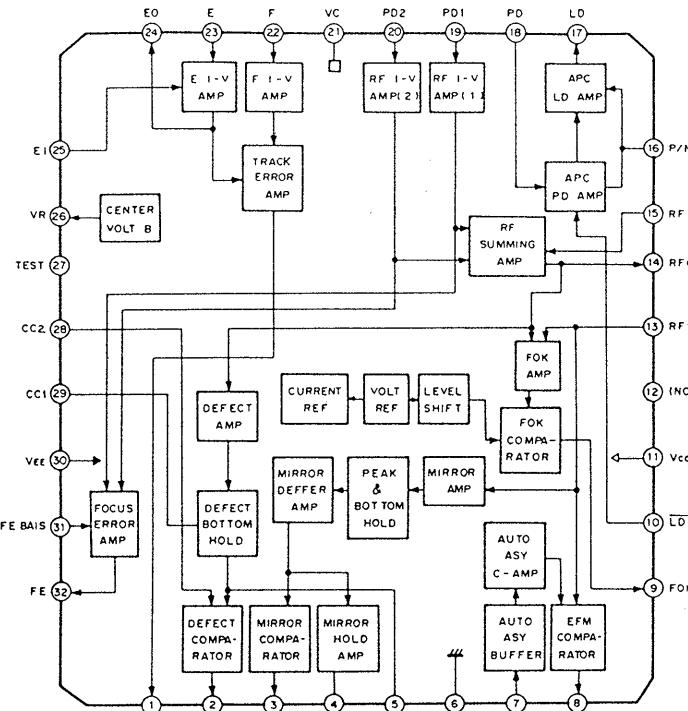


4-7. IC BLOCK DIAGRAM

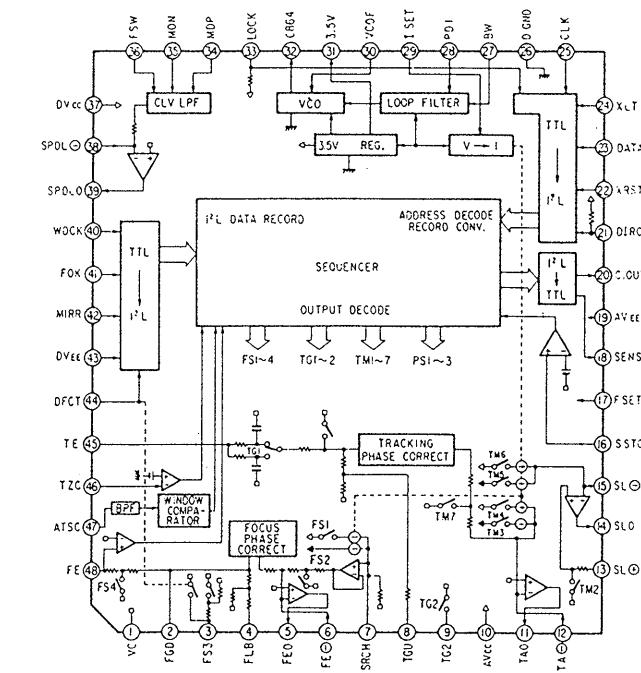
IC101, 201
PCM-66PJ



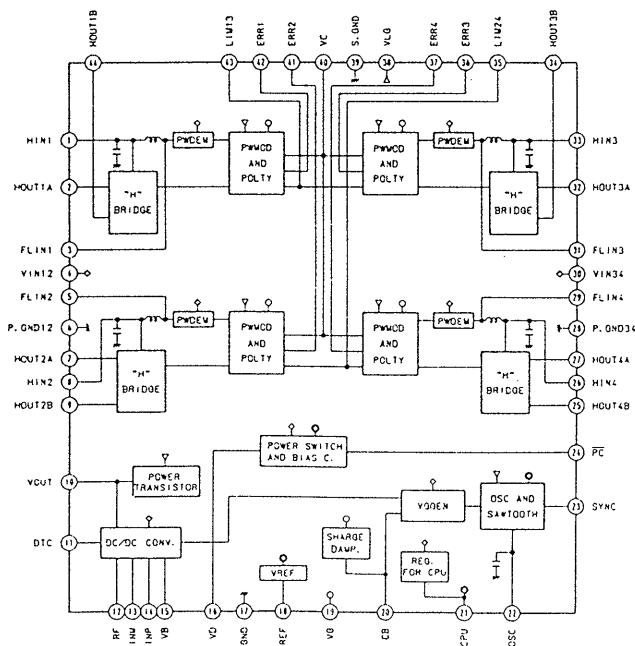
IC501
CXA1271Q



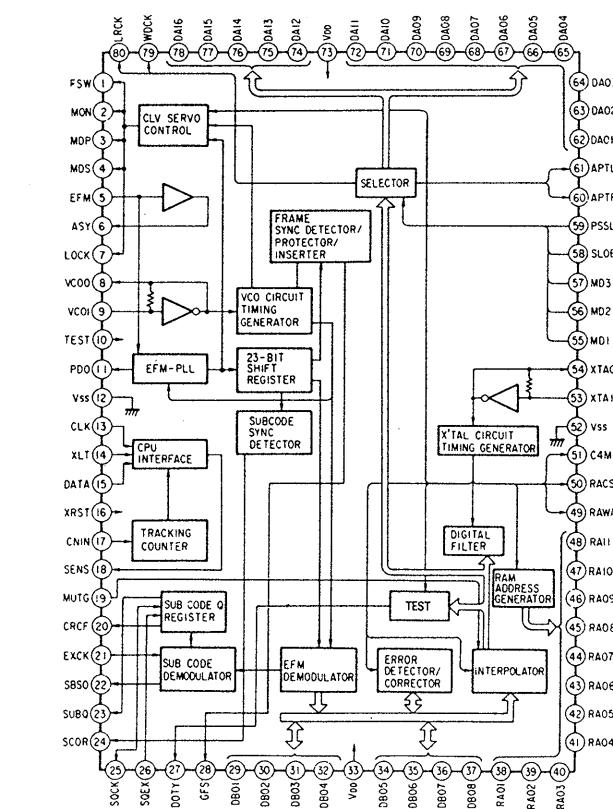
IC502
CXA1272R



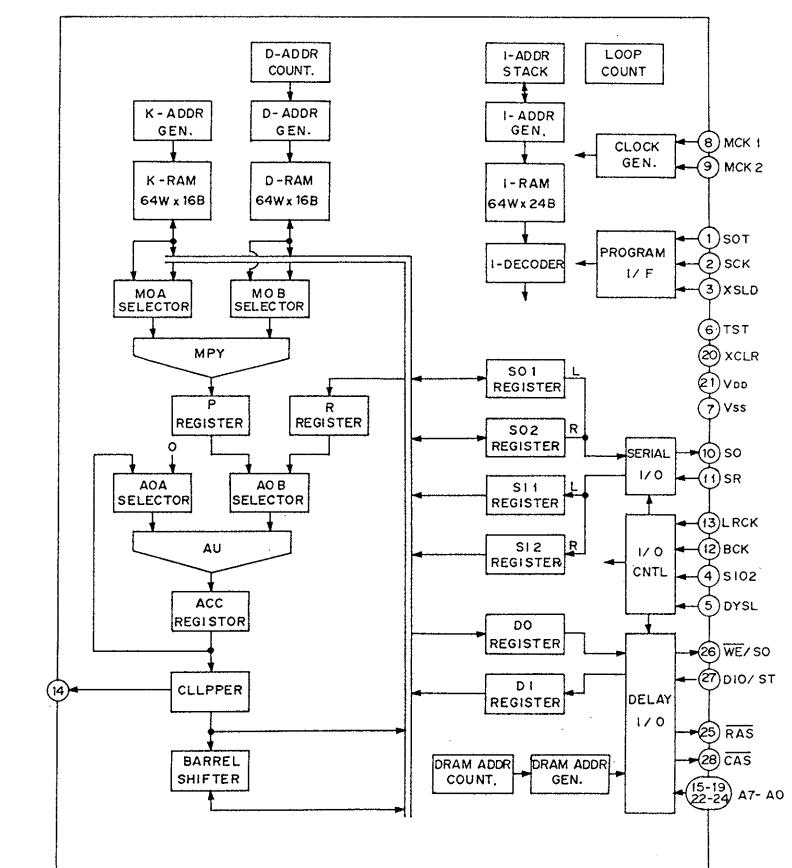
IC504
MPC1715



IC601
CXD1125Q



IC301
CXD1160AQ



SECTION 5

EXPLODED VIEWS

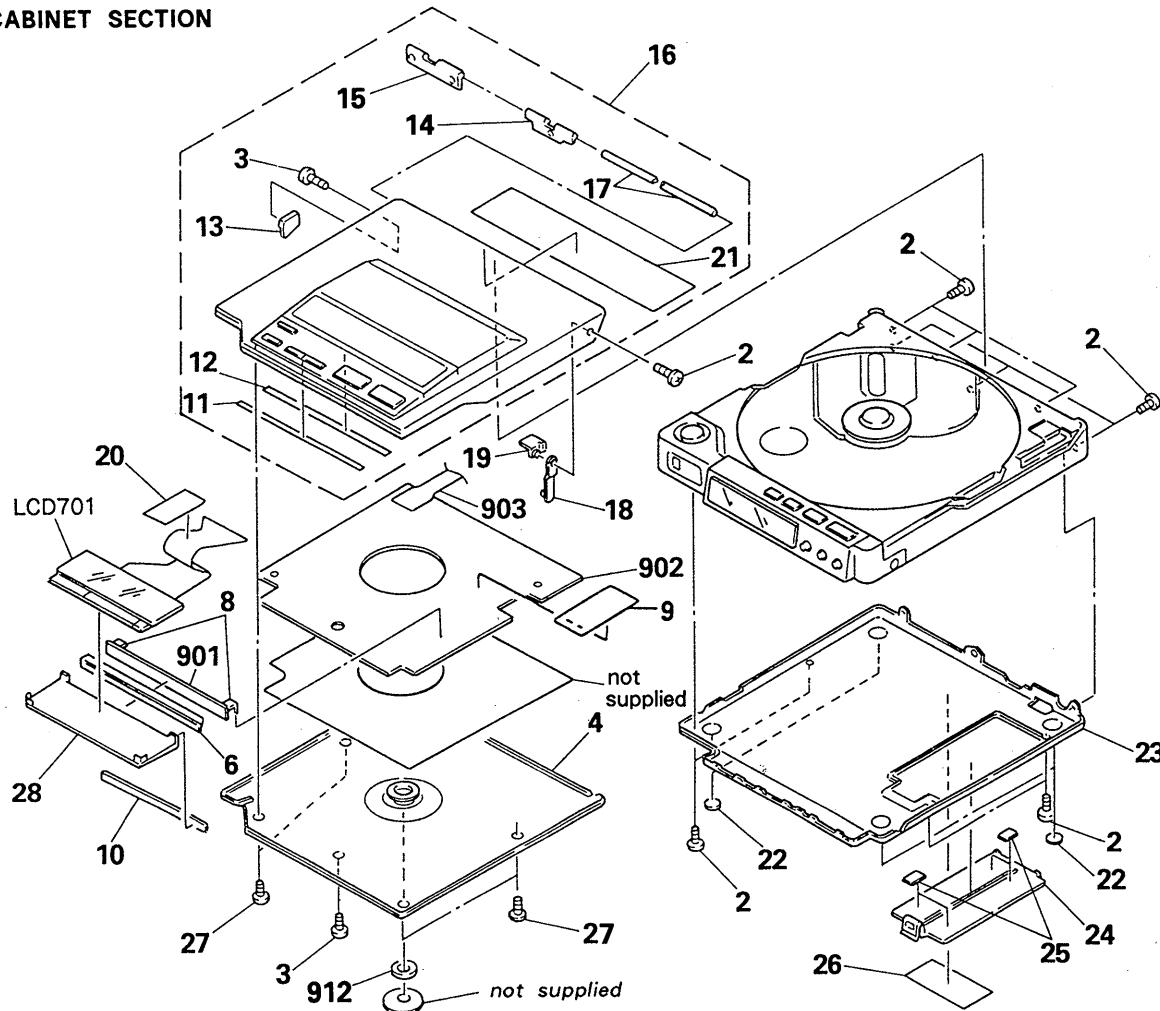
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:**
(RED) ... KNOB, BALANCE (WHITE)
↑ ↑
Cabinet's Color Parts' Color

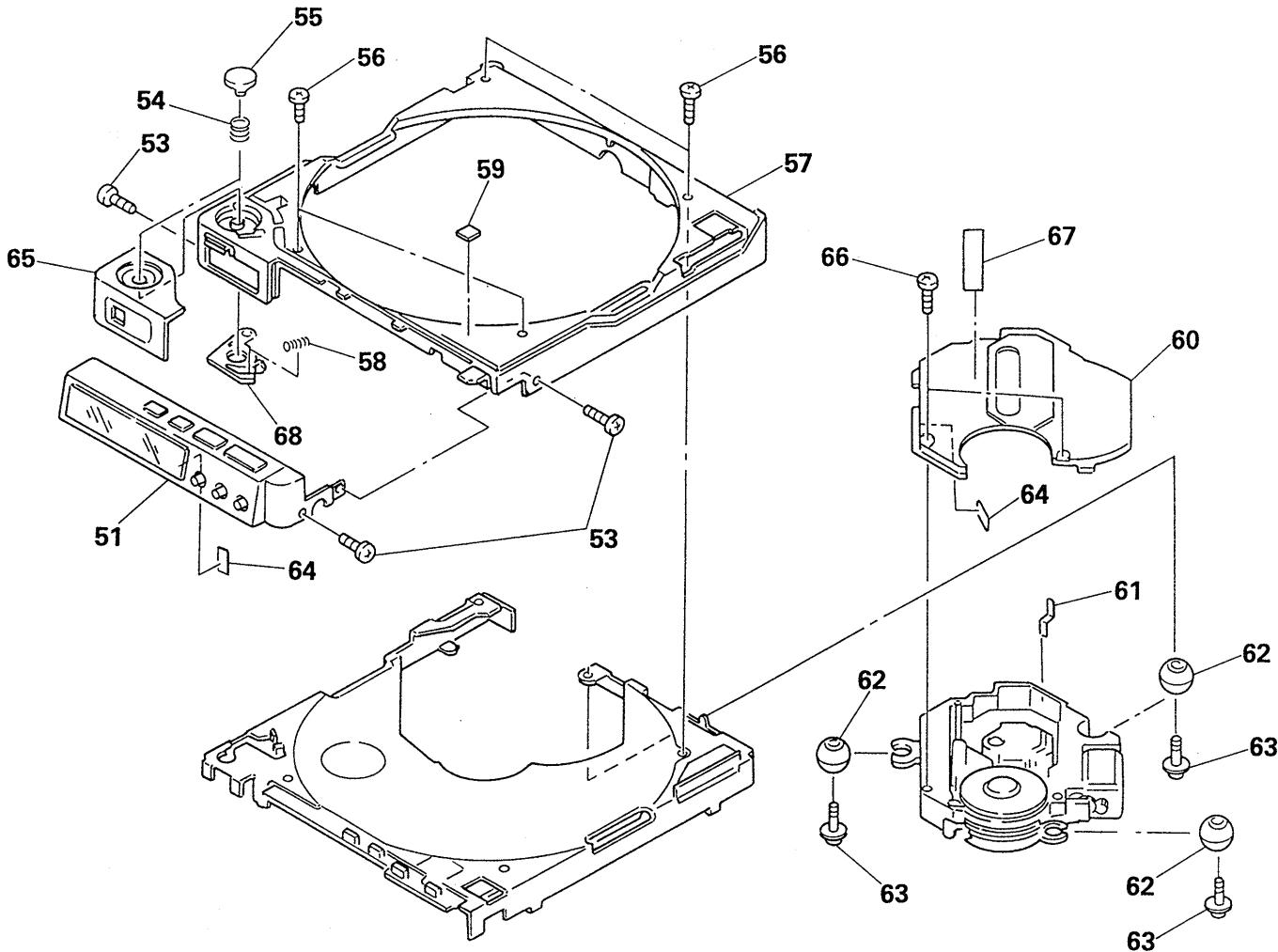
The components identified by mark or dotted line with mark are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET SECTION

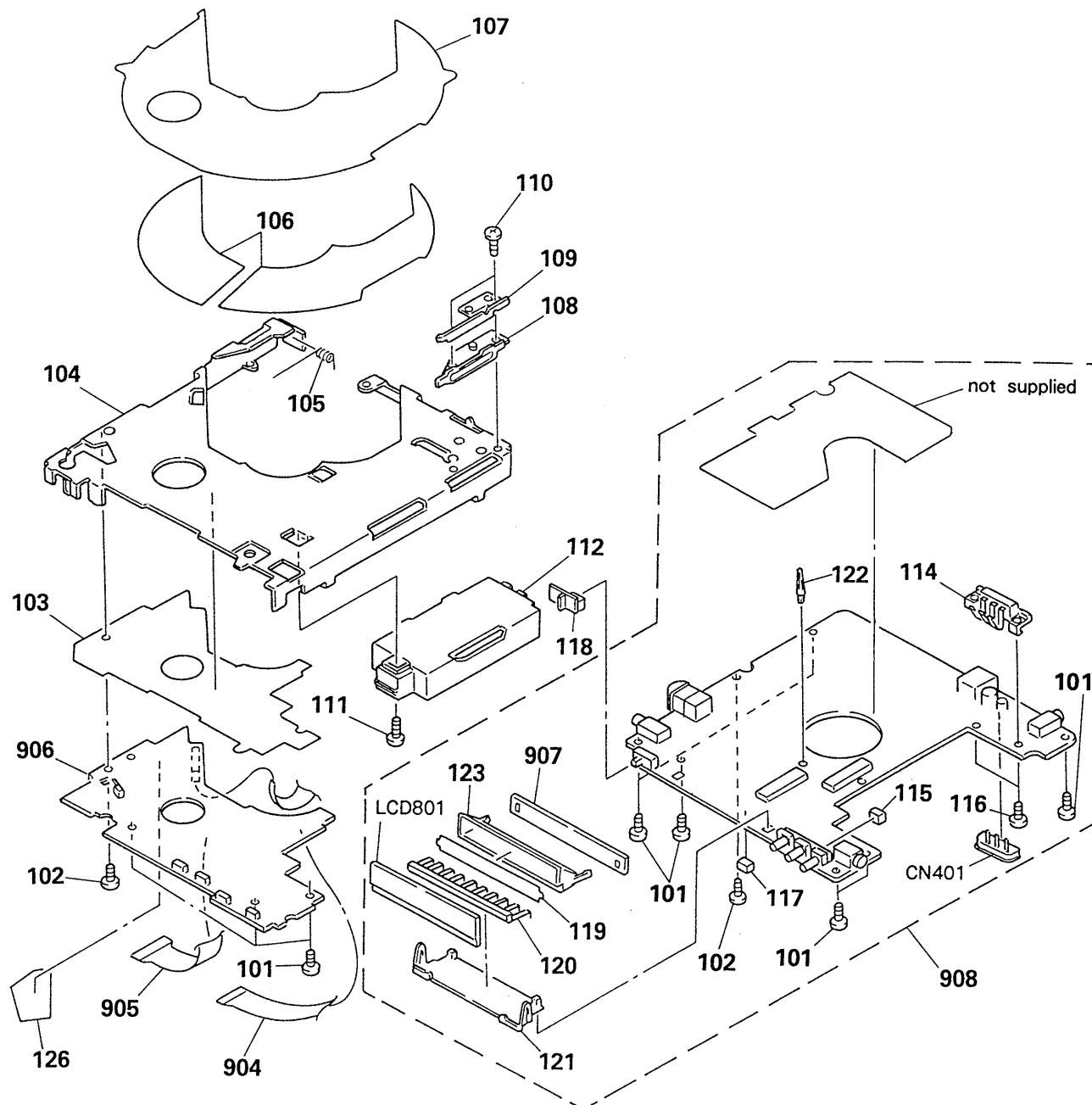
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
2	3-703-816-72	SCREW (M1.4X3.0), SPECIAL HEAD		19	X-4917-704-1	BRACKET ASSY, SWITCHING PLATE	
3	3-895-823-41	SCREW (B1.4X4), TAPPING		20	*4-926-115-01	CUSHION (P)	
4	A-3043-251-A	COVER (LID) ASSY		21	*4-932-714-01	SHEET (UPPER LID), INSULATING	
6	*4-926-163-01	HOLDER (T-LED)		22	4-912-641-01	FOOT, RUBBER	
8	4-926-167-01	TERMINAL BOARD (LED)		23	X-4921-243-1	PANEL ASSY, BOTTOM	
9	*4-932-718-01	SPACER (LCD FLEXIBLE)		24	4-926-185-01	LID, BATTERY CASE	
10	*4-932-707-01	SHEET (DIFFUSION T)		25	3-831-441-XX	CUSHION	
11	4-926-172-01	SHEET (F), ADHESIVE		26	*4-926-188-01	(US,Canadian).....LABEL, MODEL NUMBER	
12	4-932-794-01	SHEET (M), ADHESIVE			*4-932-712-01	(AEP,FRENCH,UK,E)...LABEL, MODEL NUMBER	
13	4-920-272-01	RETAINER, SPRING, SWITCHING		27	3-703-816-02	SCREW (M1.4X2.0), SPECIAL HEAD	
14	4-924-143-01	HINGE (RIGHT)		28	X-4921-249-1	PLATE (T) ASSY, LIGHT GUIDE	
15	4-924-142-01	HINGE (LEFT)		901	*1-631-515-11	PC BOARD, LED-2	
16	A-3043-250-A	PLATE ASSY, TRANSPARENT		902	*1-631-516-12	PC BOARD, KEY	
17	4-924-144-01	SHAFT, FULCRUM		903	1-632-626-11	PC BOARD, KEY FLEXIBLE	
18	X-4921-216-1	PLATE (B) ASSY, SWITCHING		912	1-452-473-11	MAGNET	
					LCD701	1-808-771-11	DISPLAY PANEL, LIQUID CRYSTAL

5-2. CHASSIS SECTION (1)

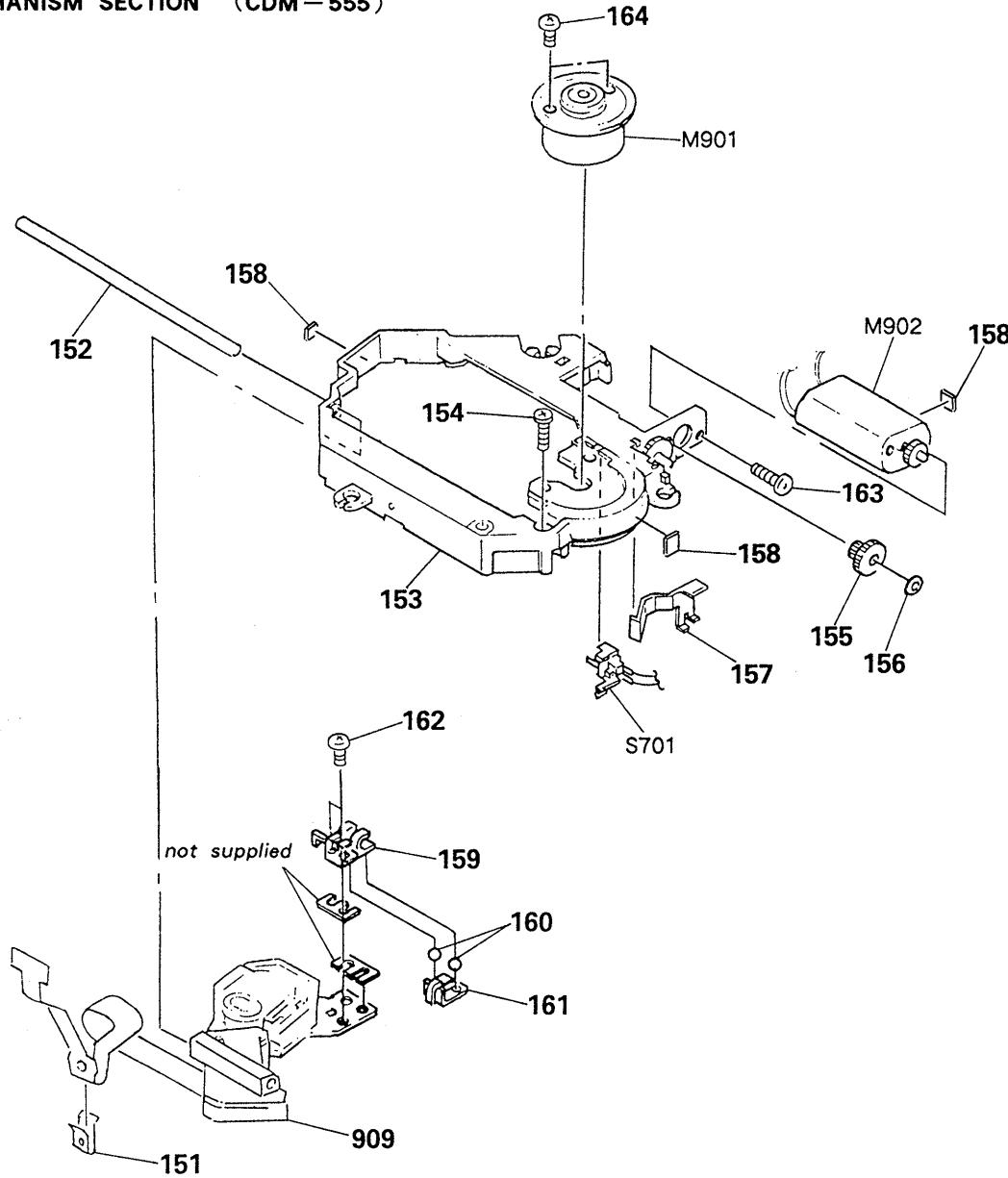


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4921-245-1	PANEL (M) ASSY, FRONT		61	3-831-441-XX	CUSHION	
53	3-703-816-72	SCREW (M1.4X3.0), SPECIAL HEAD		62	X-4917-723-1	DAMPER	
54	4-917-727-01	SPRING, COMPRESSION		63	4-920-209-01	SCREW (INSULATOR), STEP	
55	4-924-130-31	BUTTON, OPEN		64	9-911-838-XX	CUSHION	
56	3-703-816-22	SCREW (M1.4X5.0), SPECIAL HEAD		65	4-926-165-01	PANEL (AL), FRONT	
57	4-926-177-01	CABINET		66	3-895-823-11	SCREW (B1.4X3), TAPPING	
58	4-924-140-01	SPRING, COMPRESSION		67	4-908-711-01	LABEL, CAUTION, LENS	
59	*4-932-708-11	CUSHION (UPPER LID)		68	4-926-161-01	LEVER, LOCK	
60	4-926-141-01	COVER, MD					

5-3. CHASSIS SECTION (2)



5-4. MECHANISM SECTION (CDM - 555)



Note:
The components identified by mark or dotted line with mark are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-917-622-01	RETAINER, FLEXIBLE		160	7-671-111-11	STEEL, BOUL 1.5MM	
152	4-917-611-01	SHAFT (A)		161	4-921-296-01	SPRING	
153	X-4930-108-1	CHASSIS ASSY, MD		162	7-627-552-38	SCREW, PRECISION +P 1.7X3	
154	4-921-299-01	SCREW (1.7X8), SPECIAL		163	7-627-553-38	SCREW, PRECISION +P 2X3	
155	4-921-292-01	GEAR (B)		164	7-627-552-08	SCREW, PRECISION +P 1.7X2.5	
156	3-315-384-11	WASHER, STOPPER		909	△8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)	
157	4-921-290-01	SPRING		M901	A-3133-384-A	MOTOR ASSY, CLV	
158	*3-880-474-11	CUSHION, 15X5X0.3		M902	A-3133-334-A	MOTOR SUB ASSY, FEED	
159	4-921-294-01	RACK (A)		S701	1-571-099-11	SWITCH (LIMIT)	

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
 UA...: μ A..., UPA...: μ PA...,
 UPC...: μ PC, UPD...: μ PD...

The components identified by mark or dotted line with mark are critical for safety.
 Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
901	*1-631-515-11	PC BOARD, LED-2			C312	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
902	*1-631-516-12	PC BOARD, KEY			C313	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
903	1-632-626-11	PC BOARD, KEY FLEXIBLE			C315	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
904	1-631-518-11	PC BOARD, FLEXIBLE			C317	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
905	1-631-517-11	PC BOARD, FLEXIBLE			C318	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
906	A-3015-778-A	PC BOARD ASSY, SERVO			C401	1-126-206-11	ELECT CHIP 100MF	20%	6.3V
907	*1-631-514-11	PC BOARD, LED-1			C402	1-135-180-21	TANTAL. CHIP 3.3MF	20%	6.3V
908	A-3015-777-A	PC BOARD ASSY, MAIN			C403	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
909	.8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)			C404	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
912	1-452-473-11	MAGNET			C405	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V
C101	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C406	1-135-180-21	TANTAL. CHIP 3.3MF	20%	6.3V
C102	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C407	1-135-162-21	TANTAL. CHIP 33MF	20%	4V
C103	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C408	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
C104	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C409	1-135-159-21	TANTAL. CHIP 10MF	20%	16V
C105	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	C410	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V
C106	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C411	1-126-357-11	ELECT 150MF	20%	16V
C107	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V	C412	1-135-180-21	TANTAL. CHIP 3.3MF	20%	6.3V
C108	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C413	1-135-159-21	TANTAL. CHIP 10MF	20%	16V
C110	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C414	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C111	1-126-206-11	ELECT CHIP 100MF	20%	6.3V	C415	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C416	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C113	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C417	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C114	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	C418	1-135-162-21	TANTAL. CHIP 33MF	20%	4V
C201	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C420	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
C202	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C421	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C203	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C422	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C204	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C423	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C205	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	C424	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C206	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C425	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C207	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V	C469	1-135-174-11	TANTAL. CHIP 10MF	20%	10V
C208	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C470	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C210	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	C471	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V
C211	1-126-206-11	ELECT CHIP 100MF	20%	6.3V	C501	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C212	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C502	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C213	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C503	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C214	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	C504	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C301	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	C505	1-163-127-00	CERAMIC CHIP 270PF	5%	50V
C302	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	C506	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C303	1-135-131-11	TANTAL. CHIP 22MF	20%	4V	C507	1-135-162-21	TANTAL. CHIP 33MF	20%	4V
C304	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C508	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C305	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C509	1-135-131-11	TANTAL. CHIP 22MF	20%	4V
C306	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C510	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C308	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V	C511	1-163-095-00	CERAMIC CHIP 12PF	5%	50V
C309	1-135-206-11	TANTAL. CHIP 47MF	20%	10V	C512	1-135-162-21	TANTAL. CHIP 33MF	20%	4V
C310	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	C513	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C311	1-162-953-11	CERAMIC CHIP 100PF	5%	50V					

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
C514	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C803	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C515	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C804	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C516	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C805	1-162-951-11	CERAMIC CHIP 68PF	5%	50V
C517	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C806	1-162-951-11	CERAMIC CHIP 68PF	5%	50V
C518	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C807	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C519	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	C808	1-162-638-11	CERAMIC CHIP 1MF		16V
C520	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V	C809	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C521	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C810	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C522	1-135-131-11	TANTAL. CHIP 22MF	20%	4V	C811	1-135-157-21	TANTAL. CHIP 10MF	20%	6.3V
C523	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	C812	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C524	1-135-131-11	TANTAL. CHIP 22MF	20%	4V	C813	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C525	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V	C814	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V
C526	1-163-081-00	CERAMIC CHIP 0.22MF		25V	C815	1-162-637-11	CERAMIC CHIP 0.47MF		16V
C527	1-162-957-11	CERAMIC CHIP 220PF	5%	50V	C818	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C528	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C851	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C529	1-164-234-11	CERAMIC CHIP 1MF		10V	C852	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C530	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	C853	1-135-131-11	TANTAL. CHIP 22MF	20%	4V
C531	1-135-131-11	TANTAL. CHIP 22MF	20%	4V	C854	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C532	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	C855	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C533	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V	C856	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C534	1-162-637-11	CERAMIC CHIP 0.47MF		16V	CN401	1-535-608-21	TERMINAL, BATTERY		
C535	1-163-135-00	CERAMIC CHIP 560PF	5%	50V	CN501	1-563-546-11	HOUSING, CONNECTOR 12P		
C536	1-163-038-00	CERAMIC CHIP 0.1MF		25V	CN502	1-568-290-11	SOCKET, CONNECTOR 4P		
C537	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	CN802	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P		
C538	1-164-234-11	CERAMIC CHIP 1MF		10V	CN804	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P		
C540	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	CN805	1-566-531-11	CONNECTOR, FPC (ZIF) 15P		
C541	1-163-038-00	CERAMIC CHIP 0.1MF		25V	D301	8-719-106-70	DIODE RD12M2B1		
C542	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D302	8-719-106-70	DIODE RD12M2B1		
C543	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D303	8-719-106-70	DIODE RD12M2B1		
C545	1-135-206-11	TANTAL. CHIP 47MF	20%	10V	D304	8-719-106-70	DIODE RD12M2B1		
C546	1-135-148-21	TANTAL. CHIP 1.5MF	10%	10V	D305	8-719-951-22	DIODE IMN10T108		
C547	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	D401	8-719-975-34	DIODE RB110C-T100		
C548	1-163-081-00	CERAMIC CHIP 0.22MF		25V	D403	8-719-400-18	DIODE MA152WK		
C549	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V	D405	8-719-975-42	DIODE RB411D-T97		
C550	1-164-234-11	CERAMIC CHIP 1MF		10V	D406	8-719-400-18	DIODE MA152WK		
C551	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D407	8-719-105-63	DIODE RD4.3MB1		
C552	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D409	8-719-975-34	DIODE RB110C-T100		
C553	1-164-234-11	CERAMIC CHIP 1MF		10V	D410	8-719-800-76	DIODE 1SS226		
C554	1-164-234-11	CERAMIC CHIP 1MF		10V	D411	8-719-400-18	DIODE MA152WK		
C555	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D412	8-719-400-18	DIODE MA152WK		
C556	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D413	8-719-975-34	DIODE RB110C-T100		
C557	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	D414	8-719-938-72	DIODE SB01-05CP		
C558	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	D415	8-719-400-18	DIODE MA152WK		
C559	1-163-010-11	CERAMIC CHIP 0.0012MF	10%	50V	D450	8-719-105-91	DIODE RD5.6MB2		
C561	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D485	8-719-105-72	DIODE RD4.7MB1		
C562	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D501	8-719-975-46	DIODE RB471E		
C563	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	D503	8-719-938-72	DIODE SB01-05CP		
C570	1-126-114-11	ELECT 470MF	20%	6.3V	D504	8-719-938-72	DIODE SB01-05CP		
C571	1-126-114-11	ELECT 470MF	20%	6.3V	D505	8-719-400-18	DIODE MA152WK		
C601	1-162-638-11	CERAMIC CHIP 1MF		16V	D506	8-719-106-70	DIODE RD12M-B1		
C602	1-162-995-11	CERAMIC CHIP 0.022MF		50V	D507	8-719-106-70	DIODE RD12M-B1		
C604	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D801	8-719-951-22	DIODE IMN10T108		
C605	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D803	8-719-400-18	DIODE MA152WK		
C606	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D804	8-719-400-18	DIODE MA152WK		
C607	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D805	8-719-975-46	DIODE RB471E		
C801	1-135-131-11	TANTAL. CHIP 22MF	20%	4V	D807	8-719-400-18	DIODE MA152WK		
C802	1-163-038-00	CERAMIC CHIP 0.1MF		25V	D808	8-719-938-72	DIODE SB01-05CP		

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
D809	8-719-400-18	DIODE MA152WK	JR301	1-216-295-00	METAL GLAZE 0 5% 1/10W
D810	8-719-105-91	DIODE RD5.6MB2	JR302	1-216-864-11	METAL GLAZE 0 5% 1/16W
D811	8-719-800-76	DIODE 1SS226	JR303	1-216-295-00	METAL GLAZE 0 5% 1/10W
D813	8-719-400-18	DIODE MA152WK	JR801	1-216-296-00	METAL GLAZE 0 5% 1/8W
D814	8-719-400-18	DIODE MA152WK	JR802	1-216-296-00	METAL GLAZE 0 5% 1/8W
D822	8-719-106-70	DIODE RD12MB1	JR803	1-216-864-11	METAL GLAZE 0 5% 1/16W
D823	8-719-106-70	DIODE RD12MB1	JR804	1-216-295-00	METAL GLAZE 0 5% 1/10W
D824	8-719-106-70	DIODE RD12MB1	L101	1-410-997-31	INDUCTOR CHIP 2.2UH
D825	8-719-400-18	DIODE MA152WK	L102	1-410-997-31	INDUCTOR CHIP 2.2UH
D826	8-719-400-18	DIODE MA152WK	L201	1-410-997-31	INDUCTOR CHIP 2.2UH
D901	8-719-302-88	DIODE SEL2913K-D	L202	1-410-997-31	INDUCTOR CHIP 2.2UH
D902	8-719-302-88	DIODE SEL2913K-D	L301	1-410-997-31	INDUCTOR CHIP 2.2UH
D903	8-719-302-88	DIODE SEL2913K-D	L402	1-412-039-51	INDUCTOR CHIP 100UH
D904	8-719-302-88	DIODE SEL2913K-D	L403	1-412-031-11	INDUCTOR CHIP 47UH
D905	8-719-302-88	DIODE SEL2913K-D	L404	1-412-029-11	INDUCTOR CHIP 10UH
D906	8-719-302-88	DIODE SEL2913K-D	L405	1-412-029-11	INDUCTOR CHIP 10UH
D907	8-719-302-88	DIODE SEL2913K-D	L501	1-412-029-11	INDUCTOR CHIP 10UH
D908	8-719-302-88	DIODE SEL2913K-D	L502	1-412-039-51	INDUCTOR CHIP 100UH
D909	8-719-302-88	DIODE SEL2913K-D	L503	1-412-032-11	INDUCTOR CHIP 100UH
D910	8-719-302-88	DIODE SEL2913K-D	L504	1-412-039-51	INDUCTOR CHIP 100UH
D911	8-719-302-88	DIODE SEL2913K-D	L505	1-412-039-51	INDUCTOR CHIP 100UH
D951	8-719-302-88	DIODE SEL2913K-D	L801	1-410-997-31	INDUCTOR CHIP 2.2UH
D952	8-719-302-88	DIODE SEL2913K-D	L802	1-410-997-31	INDUCTOR CHIP 2.2UH
D954	8-719-302-88	DIODE SEL2913K-D	L803	1-410-997-31	INDUCTOR CHIP 2.2UH
D955	8-719-302-88	DIODE SEL2913K-D	LCD701	1-808-771-11	DISPLAY PANEL, LIQUID CRYSTAL
IC101	8-759-983-82	IC PCM66P-J	LCD801	1-808-770-11	DISPLAY PANEL, LIQUID CRYSTAL
IC102	8-759-710-79	IC NJM2107F	M901	A-3133-384-A	MOTOR ASSY, CLV
IC103	8-759-710-79	IC NJM2107F	M902	A-3133-334-A	MOTOR SUB ASSY, FEED
IC201	8-759-983-82	IC PCM66P-J	Q101	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC202	8-759-710-79	IC NJM2107F	Q102	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC203	8-759-710-79	IC NJM2107F	Q103	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC301	8-752-332-80	IC CXD1160AQ	Q201	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC302	8-752-334-07	IC CXD2551M	Q202	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC305	8-759-230-43	IC TC7S04F	Q203	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC306	8-752-039-94	IC CXA1263M-T3	Q301	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC401	8-759-230-43	IC TC7S04F	Q303	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC402	8-759-977-71	IC GP1F31T (OPTICAL DIGITAL OUT)	Q401	8-729-904-87	TRANSISTOR 2SB1197K-R
IC501	8-752-033-55	IC CXA1271Q	Q402	8-729-901-78	TRANSISTOR 2SC2412K
IC502	8-752-033-98	IC CXA1272R	Q403	8-729-901-00	TRANSISTOR DTC124EK
IC503	8-759-710-79	IC NJM2107F	Q406	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC504	8-759-030-17	IC MPC1715FU	Q407	8-729-216-22	TRANSISTOR 2SA1162G
IC505	8-759-230-43	IC TC7S04F	Q408	8-729-903-10	TRANSISTOR FMWI
IC601	8-752-332-38	IC CXD1125Q	Q409	8-729-921-84	TRANSISTOR 2SB1182F5-Q
IC602	8-752-328-67	IC CXK5816MA-15L	Q410	8-729-901-03	TRANSISTOR DTC144WK
IC801	8-752-811-62	IC CXP5086-608Q	Q411	8-729-901-00	TRANSISTOR DTC124EK
IC802	8-759-982-77	IC BA10339F	Q412	8-729-207-55	TRANSISTOR RN1401
IC803	8-759-234-10	IC TC7S32F	Q413	8-729-901-78	TRANSISTOR 2SC2412K
IC851	8-759-420-54	IC MN18762-SND-3	Q414	8-729-901-05	TRANSISTOR DTA124EK
IC852	8-759-205-06	IC MC74HC74AF	Q415	8-729-901-03	TRANSISTOR DTC144WK
IC853	8-759-013-92	IC MC74HC164F	Q416	8-729-901-00	TRANSISTOR DTC124EK
IC854	8-759-013-92	IC MC74HC164F	Q417	8-729-921-84	TRANSISTOR 2SB1182F5-Q
IC855	8-759-231-30	IC TC4S30F	Q418	8-729-903-10	TRANSISTOR FMWI
IC856	8-759-234-10	IC TC7S32F	Q420	8-729-907-39	TRANSISTOR IMD2
IC857	8-759-234-10	IC TC7S32F	Q421	8-729-901-05	TRANSISTOR DTA124EK
IC858	8-759-234-10	IC TC7S32F	Q422	8-729-901-00	TRANSISTOR DTC124EK
IC859	8-759-986-85	IC S-8052ALR-LF			
J301	1-563-281-41	JACK (LINE OUT)			
J302	1-563-281-51	JACK (PHONES)			
J401	1-562-961-11	JACK (DC IN 9V)			
J801	1-563-281-61	JACK (REMOTE)			

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
Q423	8-729-116-06	TRANSISTOR	2SK160-K6			R309	1-216-833-11	METAL GLAZE	10K	5%	1/16W
Q424	8-729-901-00	TRANSISTOR	DTC124EK			R310	1-216-833-11	METAL GLAZE	10K	5%	1/16W
Q425	8-729-216-22	TRANSISTOR	2SA812			R311	1-216-841-11	METAL GLAZE	47K	5%	1/16W
Q427	8-729-216-22	TRANSISTOR	2SA812			R312	1-216-857-11	METAL GLAZE	1M	5%	1/16W
Q428	8-729-902-96	TRANSISTOR	FMS1			R313	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
Q429	8-729-903-10	TRANSISTOR	FMW1			R401	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
Q430	8-729-116-06	TRANSISTOR	2SK160-K6			R402	1-216-845-11	METAL GLAZE	100K	5%	1/16W
Q431	8-729-807-33	TRANSISTOR	2SB1123-R			R403	1-216-841-11	METAL GLAZE	47K	5%	1/16W
Q432	8-729-901-00	TRANSISTOR	DTC124EK-T-97			R404	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W
Q433	8-729-807-33	TRANSISTOR	2SB1112-R			R405	1-216-106-00	METAL GLAZE	240K	5%	1/10W
Q435	8-729-904-87	TRANSISTOR	2SB1197K-R			R406	1-216-837-11	METAL GLAZE	22K	5%	1/16W
Q461	8-729-904-87	TRANSISTOR	2SB1197K-R			R407	1-216-073-00	METAL GLAZE	10K	5%	1/10W
Q462	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R408	1-216-857-11	METAL GLAZE	1M	5%	1/16W
Q463	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R409	1-216-821-11	METAL GLAZE	1K	5%	1/16W
Q464	8-729-901-05	TRANSISTOR	DTA124EK			R410	1-216-033-00	METAL GLAZE	220	5%	1/10W
Q465	8-729-901-00	TRANSISTOR	DTC124EK			R411	1-216-833-11	METAL GLAZE	10K	5%	1/16W
Q466	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R412	1-216-092-00	METAL GLAZE	62K	5%	1/10W
Q501	8-729-402-90	TRANSISTOR	XN4609			R413	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
Q502	8-729-904-87	TRANSISTOR	2SB1197K			R414	1-216-837-11	METAL GLAZE	22K	5%	1/16W
Q503	8-729-920-78	TRANSISTOR	2SC2412K-R			R415	1-216-821-11	METAL GLAZE	1K	5%	1/16W
Q504	8-729-920-78	TRANSISTOR	2SC2412K-R			R416	1-216-021-00	METAL GLAZE	68	5%	1/10W
Q505	8-729-805-43	TRANSISTOR	2SC3396			R417	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
Q506	8-729-901-00	TRANSISTOR	DTC124EK			R418	1-216-664-11	METAL CHIP	3.6K	0.50%	1/10W
Q801	8-729-901-00	TRANSISTOR	DTC124EK			R419	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
Q804	8-729-901-05	TRANSISTOR	DTA124EK			R420	1-216-697-11	METAL CHIP	82K	0.50%	1/10W
Q805	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R421	1-216-041-00	METAL GLAZE	470	5%	1/10W
Q806	8-729-901-05	TRANSISTOR	DTA124EK			R422	1-216-037-00	METAL GLAZE	330	5%	1/10W
Q807	8-729-907-39	TRANSISTOR	IMD2			R423	1-216-833-11	METAL GLAZE	10K	5%	1/16W
Q808	8-729-901-06	TRANSISTOR	DTA144EK			R426	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W
Q809	8-729-901-00	TRANSISTOR	DTC124EK			R427	1-217-806-11	METAL GLAZE	1	5%	1/8W
R101	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	R428	1-217-806-11	METAL GLAZE	1	5%	1/8W
R102	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	R429	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R103	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	R430	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R105	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R435	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R106	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R436	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R107	1-216-813-11	METAL GLAZE	220	5%	1/16W	R437	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R113	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R438	1-216-041-00	METAL GLAZE	470	5%	1/10W
R114	1-216-797-11	METAL GLAZE	10	5%	1/16W	R439	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R115	1-216-833-11	METAL GLAZE	10K	5%	1/16W	R440	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R121	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R441	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R122	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	R442	1-216-017-00	METAL GLAZE	47	5%	1/10W
R123	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R443	1-216-041-00	METAL GLAZE	470	5%	1/10W
R201	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	R444	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R202	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	R469	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R203	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	R471	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R205	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R472	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R206	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R501	1-216-024-00	METAL GLAZE	91	5%	1/10W
R207	1-216-813-11	METAL GLAZE	220	5%	1/16W	R502	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R213	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R503	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R214	1-216-797-11	METAL GLAZE	10	5%	1/16W	R504	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R215	1-216-833-11	METAL GLAZE	10K	5%	1/16W	R505	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R221	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	R506	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R222	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	R507	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R223	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	R508	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R303	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W	R509	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R304	1-216-021-00	METAL GLAZE	68	5%	1/10W	R510	1-216-150-00	METAL GLAZE	10	5%	1/8W
R307	1-216-821-11	METAL GLAZE	1K	5%	1/16W	R511	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R308	1-216-833-11	METAL GLAZE	10K	5%	1/16W						

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R512	1-216-837-11	METAL GLAZE	22K	5%	1/16W	R812	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W
R513	1-216-859-11	METAL GLAZE	1.5M	5%	1/16W	R813	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R514	1-216-851-11	METAL GLAZE	330K	5%	1/16W	R814	1-216-298-00	METAL GLAZE	2.2	5%	1/10W
R515	1-216-833-11	METAL GLAZE	10K	5%	1/16W	R815	1-216-045-00	METAL GLAZE	680	5%	1/10W
R516	1-216-843-11	METAL GLAZE	68K	5%	1/16W	R816	1-218-163-11	METAL GLAZE	120K	1%	1/10W
R517	1-216-845-11	METAL GLAZE	100K	5%	1/16W	R817	1-216-694-11	METAL CHIP	62K	0.50%	1/10W
R518	1-216-106-00	METAL GLAZE	240K	5%	1/10W	R818	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R519	1-216-844-11	METAL GLAZE	82K	5%	1/16W	R819	1-216-654-11	METAL CHIP	1.3K	0.50%	1/10W
R520	1-216-844-11	METAL GLAZE	82K	5%	1/16W	R820	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R521	1-216-837-11	METAL GLAZE	22K	5%	1/16W	R821	1-216-688-00	METAL GLAZE	36K	0.50%	1/10W
R522	1-216-845-11	METAL GLAZE	100K	5%	1/16W	R823	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R523	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W	R824	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R524	1-216-118-00	METAL GLAZE	750K	5%	1/10W	R826	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R525	1-216-833-11	METAL GLAZE	10K	5%	1/16W	R831	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R526	1-216-841-11	METAL GLAZE	47K	5%	1/16W	R832	1-216-849-11	METAL GLAZE	220K	5%	1/16W
R527	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	R833	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R528	1-216-103-00	METAL GLAZE	180K	5%	1/10W	R839	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R529	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W	R851	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R530	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W	R852	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R531	1-216-121-00	METAL GLAZE	1M	5%	1/10W	R853	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R532	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	R854	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R533	1-216-833-11	METAL GLAZE	10K	5%	1/16W	R855	1-216-678-11	METAL CHIP	13K	0.50%	1/10W
R534	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W	R856	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R535	1-216-821-11	METAL GLAZE	1K	5%	1/16W	R857	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R536	1-216-846-11	METAL GLAZE	120K	5%	1/16W	R858	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R537	1-216-846-11	METAL GLAZE	120K	5%	1/16W	R859	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R538	1-216-841-11	METAL GLAZE	47K	5%	1/16W	R860	1-216-682-11	METAL CHIP	20K	0.50%	1/10W
R539	1-216-857-11	METAL GLAZE	1M	5%	1/16W	R901	1-216-021-00	METAL GLAZE	68	5%	1/10W
R540	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R902	1-216-021-00	METAL GLAZE	68	5%	1/10W
R542	1-216-847-11	METAL GLAZE	150K	5%	1/16W	R903	1-216-021-00	METAL GLAZE	68	5%	1/10W
R543	1-216-847-11	METAL GLAZE	150K	5%	1/16W	R904	1-216-033-00	METAL GLAZE	220	5%	1/10W
R544	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	R951	1-216-033-00	METAL GLAZE	220	5%	1/10W
R545	1-216-838-11	METAL GLAZE	27K	5%	1/16W	R952	1-216-033-00	METAL GLAZE	220	5%	1/10W
R546	1-216-840-11	METAL GLAZE	39K	5%	1/16W	RV401	1-237-325-11	RES, ADJ, METAL GLAZE	4.7K		
R548	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W	RV402	1-237-328-11	RES, ADJ, METAL GLAZE	47K		
R549	1-216-857-11	METAL GLAZE	1M	5%	1/16W	RV501	1-230-869-11	RES, ADJ, METAL GLAZE	4.7K		
R550	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	RV502	1-230-871-11	RES, ADJ, METAL GLAZE	22K		
R551	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	RV503	1-230-873-11	RES, ADJ, METAL GLAZE	47K		
R552	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W	RV504	1-237-575-11	RES, ADJ, METAL GLAZE	1.0K		
R553	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	RV505	1-230-873-11	RES, ADJ, METAL GLAZE	47K		
R554	1-216-049-00	METAL GLAZE	1K	5%	1/10W	RV801	1-237-143-11	RES, ADJ, METAL GLAZE	10K		
R555	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W	S701	1-571-099-11	SWITCH (LIMIT)			
R556	1-216-109-00	METAL GLAZE	330K	5%	1/10W	S801	1-571-484-11	SWITCH, KEY BOARD(ENTER REMAIN PLAY KEY)			
R557	1-216-857-11	METAL GLAZE	1M	5%	1/16W	S802	1-570-204-11	SWITCH, KEY BOARD (▶■)			
R601	1-216-841-11	METAL GLAZE	47K	5%	1/16W	S803	1-570-204-11	SWITCH, KEY BOARD (■)			
R602	1-216-845-11	METAL GLAZE	100K	5%	1/16W	S804	1-570-204-11	SWITCH, KEY BOARD (▶)			
R603	1-216-841-11	METAL GLAZE	47K	5%	1/16W	S805	1-570-204-11	SWITCH, KEY BOARD (◀)			
R801	1-216-833-11	METAL GLAZE	10K	5%	1/16W	S808	1-572-003-11	SWITCH, SLIDE (HOLD —)			
R802	1-216-837-11	METAL GLAZE	22K	5%	1/16W	S901	1-554-911-11	SWITCH, LEAF (DOOR)			
R803	1-216-837-11	METAL GLAZE	22K	5%	1/16W	S902	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(EQ)			
R804	1-216-837-11	METAL GLAZE	22K	5%	1/16W	S903	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)			
R805	1-216-833-11	METAL GLAZE	10K	5%	1/16W	S904	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)			
R806	1-216-841-11	METAL GLAZE	47K	5%	1/16W	S905	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)			
R807	1-216-851-11	METAL GLAZE	330K	5%	1/16W	S906	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)			
R808	1-216-041-00	METAL GLAZE	470	5%	1/10W	S907	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(MODE)			
R809	1-216-025-00	METAL GLAZE	100K	5%	1/10W	X301	1-567-737-11	VIBRATOR, CRYSTAL			
R810	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W	X801	1-577-064-11	VIBRATOR, CHIP CERAMIC			
R811	1-216-097-00	METAL GLAZE	100K	5%	1/10W	X851	1-567-196-11	OSCILLATOR, CERAMIC			

ACCESSORY & PACKING MATERIAL

1-463-691-11 (US,Canadian)...ADAPTOR, AC (AC-930A)
 1-463-700-11 (UK).....ADAPTOR, AC (AC-930A)
 1-463-702-11 (E).....ADAPTOR, AC (AC-950W)
 1-463-705-11 (AEP,FRENCH)...ADAPTOR, AC (AC-930AEP)
 1-463-968-11 (US).....ADAPTOR, AC (AC-940)
 1-526-565-00 (E).....AC PLUG ADAPTOR

 1-528-297-11 (US,Canadian,UK,E)...BATTERY PACK (BP-2EX)
 1-528-297-21 (AEP,FRENCH).....BATTERY PACK (BP-2EX)

 1-555-658-21 CORD, CONNECTION
 1-575-145-11 CORD, CONNECTION

 3-750-539-11 (Canadian,AEP,FRENCH,UK,E)...MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
 3-750-539-21 (US).....MANUAL, INSTRUCTION (ENGLISH)
 3-750-539-41 (AEP).....MANUAL, INSTRUCTION (GERMAN,ITALIAN,DUTCH,SWEDISH)

 4-920-407-01 (US,Canadian,E)...BAG, PROTECTION
 4-926-173-01 CASE, CARRYING

 *4-926-192-01 CUSHION (UPPER)
 4-926-193-01 (US,Canadian,E)...CUSHION (LOWER)
 *4-932-701-01 (AEP,FRENCH,UK)...CUSHION (LOWER)

 *4-926-194-01 (US,Canadian)...INDIVIDUAL CARTON
 *4-926-199-01 (E).....INDIVIDUAL CARTON
 *4-932-702-01 (AEP).....INDIVIDUAL CARTON
 *4-932-704-01 (FRENCH,UK)....INDIVIDUAL CARTON